

KV-X2132U

RM-689

SONY SERVICE MANUAL

UK Model

Chassis No. SCC-D46A-A

CORRECTION-1

Correct the service manual as shown below

File the correction with the service manual.

 : indicates corrected portion (See page 58)

SECTION 6 EXPLODED VIEWS

INCORRECT	CORRECT
18 SPEAKER	18 1-544-525-11 SPEAKER



9-964-507-91

Sony Corporation
TV Group

English
91JE1819-1
Printed in Japan
© 1991. 10

KV-X2131D
RM-689

SERVICE MANUAL

AEP Model
Chassis No. SCC-D51A-A



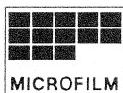
AE-1B CHASSIS

Note: The service manual for RM-689 has been issued separately.

MODELS OF THE SAME SERIES	
KV-X2131D	

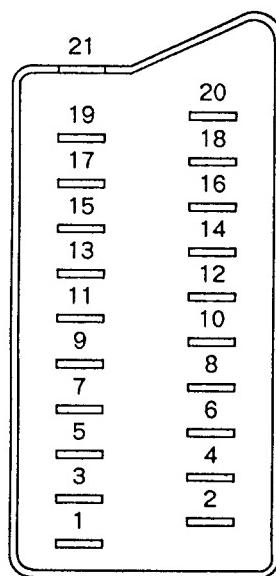
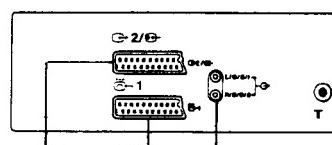
SPECIFICATIONS

Television system	B/G/H	Sound output	15 W + 15 W (music power)
Color system	PAL, SECAM, NTSC3.58, NTSC4.43	Power consumption	87 Wh
Channel coverage	VHF : E2-E12 UHF : 21-69 CABLE : S1-S41	Dimensions	Approx. 530x438x473 mm (w/h/d)
Picture tube	Trinitron tube Approx. 54.5 cm (21 inches) (Approx. 51 cm picture measured diagonally 110-degree deflection)	Weight	Approx. 24.5 kg
Inputs	④ 1 21-pin connector : CENELEC standard including RGB input. ④ 2 21-pin connector : including S video input ④ 3 Video, Audio : phono jack.	Supplied accessories	RM-689 Remote Commander (1) IEC designation R6 batteries (2)
Outputs	21-pin connector : CENELEC standard Headphones jack : stereo minijack External speaker terminals : 2-pin DIN Audio output jacks : phono jack (output dependent upon TV settings)	Design and specifications are subject to change without notice.	



TRINITRON® COLOUR TV
SONY®

21 pin connector (G-1, G-2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
2	○	○	Audio input B (right)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
3	○	○	Audio output A (left)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5–12 V) : Part mode Low state (0–2 V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal : 0.7V±3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1–3 V) Low state (0–0.4 V) Input impedance : 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
20	○	—	Video input	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
	—	○	Video input/Y (S signal)	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open)

* at 20 Hz–20 kHz

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK

⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

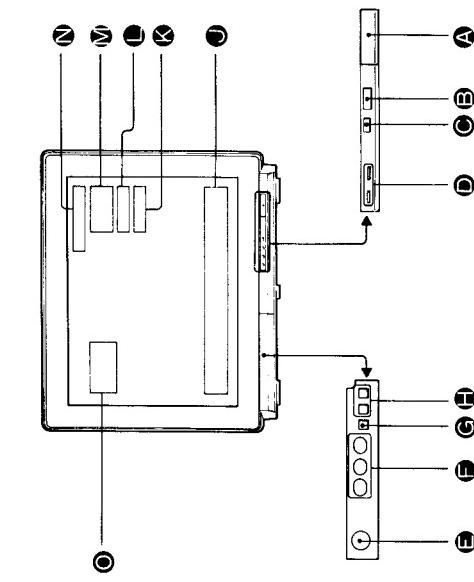
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SECTION 1

GENERAL

1-1. FUNCTION OF CONTROLS



ON THE SET

A Power Switch ① Use it to switch the set on and off. When you switch the set on, the programme number of the station tuned in will be indicated in the on-screen display ⑩ for some seconds. In case of short breaks of operation, you can switch the set on and off using the Remote Commander (See «CONTROLS ON THE REMOTE COMMANDER»).

B Remote control detector (See «CONTROLS ON THE REMOTE COMMANDER»).

C Standby/Response indicator This indicator lights up when the TV set is in standby mode and it flashes each time the set receives signals from the Remote Commander.

D Stereo A/B indicators ② During bilingual programmes one of the two indicators lights up, depending upon the selected channel A or B. When stereo programmes are broadcast both indicators light up. (See «CONTROLS ON THE REMOTE COMMANDER»).

JACKS AND CONTROL PANEL

The jacks and the control panel are situated behind a cover. Please press the arrow marking on the cover to open it.

E Headphones jack (stereo minijack) ③ Connect only stereo headphones.

F Input jacks ④ Video input jack (phono jack) ⑤-3 (yellow), Audio input jacks (phono jacks) L/G/S/I and R/D/D/D ⑥ (red and white).

G Mode select button ⑦ Use this button to select either the channel select mode volume adjustment ⑧ or the ⑨ input mode.

H Adjustment buttons +/- ⑩ Select at first the item to be adjusted using the Mode select button ⑪ (P: channel select mode), ⑫ (volume) or ⑬ (input mode), then adjust the item by pressing the + or - button.

You can also use these buttons to reset the picture and sound adjustments to the factory-set levels. For this purpose press both buttons simultaneously.

I On-screen display When you repeatedly press button ⑩ on the Remote Commander, the following information will be indicated on the screen in turn.

PICTURE AND SOUND ADJUSTMENT ITEMS:

⑪ contrast, ⑫ colour, ⑬ brightness, ⑭ hue (only for NTSC); ⑮ bass, ⑯ treble or ⑰ balance and the respective levels; as well as ⑱ mute, ⑲ reset, ⑳ space sound and ㉑ loudness indications, when the respective buttons are pressed.

When you press button ⑩ on the Remote Commander, the following information will be indicated on the screen:

- ⑩ TV-System: B/G
- ⑪ Channel number
- ⑫ Programme number or input mode:
⑩-1, ⑩-2, ⑩-3;
- ⑬ Indication of the station name
- ⑭ AV output indication: 1 ⑩, 2 ⑩, 3 ⑩, or TV ⑩ (see «CONTROLS ON THE REMOTE COMMANDER»).

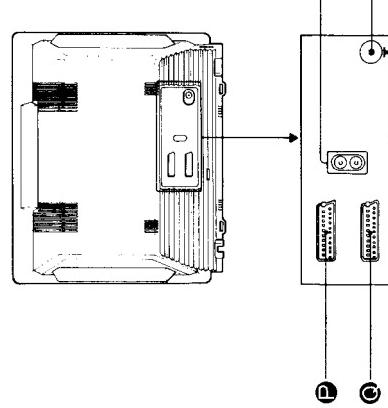
CONNECTORS ON THE REAR

P Euro-AV-connector 21-pin ⑩-2 ⑩-3 For connecting a VTR, 8 mm video camera recorder, a video disc player or in general devices with an S-Video-output.

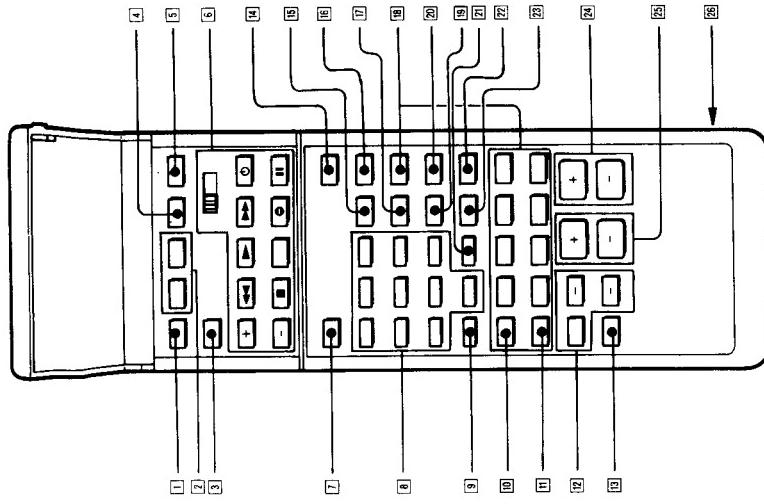
Q Euro-AV-connector 21-pin ⑩-1 For connecting a VTR, a computer etc. with RGB output.

R Audio-output-jacks (phono jacks) ⑩-1 For connecting audio equipment, e.g. an amplifier, so that the sound will be output at the audio equipment. In this case the volume is adjustable on the TV set.

S Aerial terminal T



ON THE REMOTE COMMANDER



4 ◇ **Store button:** Used for storing channels. See "TO PRESET CHANNELS".

5 ⓧ **TV-system-select button:** This button has no function.

6 **Video selector and video operation buttons:** Used for operating Sony video equipment. For details see "CONNECTING OTHER EQUIPMENT".

7 ☰ **Mute button:** By pressing this button the sound of the set will be switched off and by pressing it once more the sound will be restored.

8 **Number buttons:**

- Used to select programme positions or to input channel numbers in the preset mode).
- If the set is in the standby mode, press one of the number buttons to switch it on.
- After pressing the Output select button ☷ the buttons 1-3 can be used to select the different Output connectors.

9 ☷ **-/+ Button:**

In case of two digit numbers, press first this button and then the two respective number buttons ☷.

10 ☰ **Button for On-screen display:**

By pressing this button information about the station tuned-in will be indicated on the screen. The indications will disappear after some seconds with the exception of the programme number, which will stay on the screen until the button is pressed once again.

11 ☰ **Time button:**

In TV-mode: If teletext service is broadcast on the selected channel, press this button to display the current time on the screen and once again to make it disappear.

12 **+/- Buttons for picture and sound adjustments:**

a) **TV-mode:**

The picture and sound adjustments are stored as standard values. You have, however, the possibility to change them to your individual liking. Press the button repeatedly until the required item is indicated in the on-screen display. ☱ contrast, ☲ colour, ☳ brightness, ☴ hue (only for NTSC colour system), ☵ sharpness, ☶ bass, ☷ treble or ☸ balance. You can adjust the settings by pressing the + or - button. b) **Preset-mode:** Use these buttons to name a station. See "TO PRESET CHANNELS".

13 ☰ **Reset button:**

By pressing this button the picture and sound adjustments are reset to the factory-set levels.

14 ☰ **Standby-button:**

Press this button to switch the set into standby-mode. You can switch it on again by pressing the TV-button ☱ or one of the number buttons ☷. To return to the teletext mode, press the ☷ button. There will be a slight delay before the picture is restored.

15 ☰ **Input-Select-Button:**

Press this button to select the audio- or video-signals input at the various input connectors. With each pressing of the button a different connector is selected. The following indications will appear sequentially:
1 → ☷ (RGB) → ☷ 2 → ☷ 3 → ☷ 4

16 ☰ **TV-Button:**

When pressing this button the set returns from standby, video input- or teletext mode to the TV-mode.

17 ☰ **Output-Select-Button:**

Press this button to select the audio- or video signals to be output at the ☷ connector. First press this button, then select the desired signal source using the number buttons ☷ (either 1, 2 or 3) or the TV-button ☱ (if the signals which are on the screen are to be output).

18 **Teletext operation buttons:**

These buttons are used for teletext operation. See "VIEWING TELETEXT".

19 ☰ **Loudness button:**

By pressing this button the high and low tones will be emphasized. Press the button again to restore the normal sound. The indications on the screen will be ☱ or ☲.

20 ☰ **A/B button:**

To select the channel of bilingual programmes. Usually the synchronised version is broadcast on channel A and the original sound is broadcast on channel B. In the video input mode (Euro-AV-connectors) this possibility of selecting channels also exists.

21 ☰ **C (Channel select) button:**

Use this button for direct channel tuning in the TV-mode. See "ADDITIONAL FUNCTIONS".

22 ☰ **Noise reduction button:**

Press to reduce the noise on the picture. The Noise reduction indicator ☱ lights up. Press the button again to restore the normal picture.

23 ☰ **Space sound button:**

Press this button to obtain special acoustic effects. Press it again to restore the normal sound. The indications on the screen will be ☱ or ☲.

24 **PROGR +/- buttons:**

Press these buttons to scan the available programmes up- or downwards. Preset mode: Use these buttons to scan the available channels up or downwards.

25 **+/- buttons for adjusting the volume:**

Used for clearing programme positions, so that the position will be skipped when the PROGR +/- buttons ☷ are pressed. See "TO PRESET CHANNELS".

26 **Battery compartment (on the rear):**

Note
Use the Standby-button ☱ only when switching the set off for a short period of time. If the set will not be used for a longer span of time, switch it off by using the Power switch ☱.

1-2. TO PRESET CHANNELS

Use the buttons on the Remote Commander for presetting. In total there are 80 programme positions at your disposal for storing channels.

There are two different ways of tuning in channels:

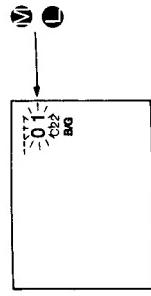
1. Direct Channel Tuning

You know the channel number of a station and can input it directly.

2. Automatic Station Search

The set searches automatically for stations (including cable channels).

3. Press button **C 2**. The indication „C“ and the channel number start blinking in the display **V**. Select the channel number with two digits (e.g. 22) using the number buttons **④**.



Skipping of unused programme positions
Using button **C 2** you have the possibility to have unused programme positions (e.g. without a stored station) skipped, when pressing the buttons PROGR +/− **②** on the Remote Commander.

1. Press button **①**. You are now in the preset mode of the set.

2. Use the buttons PROGR +/− **②** to select the programme position, which you want to have skipped.

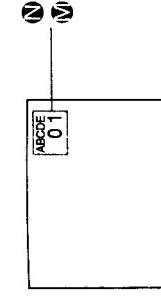
3. Press button **C 2** **③**.

4. Press button **④** to store the cleared programme position and to return to the TV-mode.

The skipped programme positions still appear when you press the number buttons **④** on the Remote commander.

If you want to select a cable channel press button **C 2** twice. In this case the indication „S“ will appear in the display **V**. Select the channel number as described above.

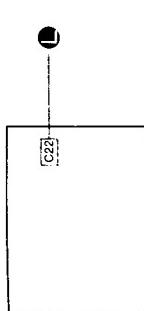
4. Press the button **④** in order to store the channel and to return to the TV-mode.



Direct Channel Tuning in the TV-mode
You have the possibility to tune in channels directly when the set is in the TV-mode without storing these channels. Example: You tune in channel number 22. If you switch the set off or change the programme position, this channel will be cancelled.

1. Press the button **C 2**. In the display **V** the indication „C“ will appear. For cable channels press the button **C 2** twice. On the screen „S“ will be displayed.

1. Preset the button **C 2**. You have the possibility to have the two buttons **⑤** (e.g. for channel 4 press first 0, then 4). The indication on the screen „S“ will disappear within some seconds.



1. Select the channel number with two digits using the number buttons **⑤** (e.g. for channel 4 press first 0, then 4). The indication on the screen „S“ will be displayed.

1. Press button **①**.

2. Use the buttons PROGR +/− **②** to select the programme position and to return to the TV-mode.

The skipped programme positions still appear when you press the number buttons **④** on the Remote commander.

If you want to name a station
After presetting the stations you have the possibility to name them. The selected name will appear in the on-screen display **N**.

1. Press the preset button **①**.

2. Press the button **②**. The first column of the station name starts blinking. Press either button + or − **④** and select the desired character (number or letter, 0-9, A-Z, or − for a blank column).

3. Press button **②** again. Now the second column starts blinking and you can select the second character. In this way five characters can be selected.



Notes

- If you press the preset button **①** instead of button **②** the set will return to the TV-mode without storing the channels.
- If you press a wrong programme or a channel number, an „xx“ will be displayed on the screen.
- When pressing two number buttons, the second number button should be pressed within 5 seconds after the first one, otherwise the operation will be cancelled.

1. If you want to store further channels, repeat the steps 1 to 4.

2. Automatic Station Search

1. Press button **①**. You are now in the preset mode of the set. The programme number in the on-screen display **V** starts blinking.

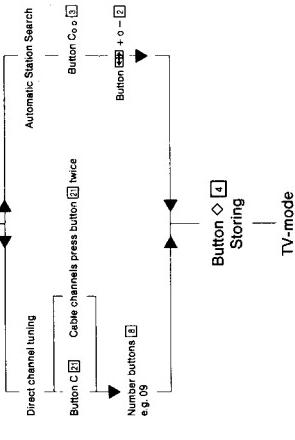
2. With the PROGR buttons +/− **②** or the number buttons **④** you can select the programme position. In case of two-digit numbers, press the first button −/− **③** and then the two number buttons.

3. If there is already a stored station on the selected programme position, press button **C 3**.

4. Press one of the tuning buttons **④** +/− **②** to start the station search. The search will be interrupted as soon as a station is tuned in. Press the tuning buttons repeatedly until you find the desired station.

5. If you have found the desired station, press button **④**. Now the selected station is stored and you are back in the TV-mode.

6. If you want to store further stations, repeat the steps 1-5.



1. Direct Channel Tuning
1. Press the Preset button **①**. You are now in the preset mode of the set. The programme number in the on-screen display **V** starts blinking.

2. With the buttons PROGR +/− **②** or the number buttons **④** you can select the programme position. In case of two-digit numbers, press first the button −/− **③** and then the two number buttons.

3. If you press the preset button **①** instead of button **②** the set will return to the TV-mode without storing the channels.

4. If you press a wrong programme or a channel number, an „xx“ will be displayed on the screen.

5. When pressing two number buttons, the second number button should be pressed within 5 seconds after the first one, otherwise the operation will be cancelled.



1.3. VIEWING TELETEXT

To view the teletext service, use the Remote Commander.
The buttons for teletext operation are indicated in green.

Operation

- 1 Select the TV channel for the desired teletext service. When the signal is weak, teletext errors often occur.
- 2 Press S / P (TEXT/MIX) to display the teletext service.
- 3 Key in the three digits of the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then, re-enter the correct page number.

The requested teletext page is displayed.

To resume normal teletext reception, press S / P .

To request the index page
Press I (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

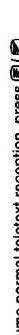
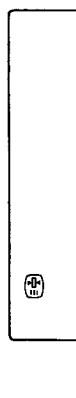
To access the next or preceding page

Press $\text{E} / \text{PAGE} +$ or $\text{E} / \text{PAGE} -$.

To superimpose the teletext display on the picture

Press S / P twice from the TV mode.
Press S / P again to return to the TEXT display.

To prevent a teletext page from being updated/changed
To resume normal teletext reception, press S / P (TEXT/MIX).



3 Enter your request time with the number buttons, using four digits. For example, 07.30.

To enlarge the teletext display
Press S / P once to enlarge the upper half of the display; press again to enlarge the lower half of the display. And press again to return to the normal display.

To reveal concealed information such as answers to a quiz

Press E (REVEAL).

To watch the TV programme while waiting for a requested page to be displayed
1 Request the new page.

- To watch the TV programme until the requested time, press S / P (TEXT CL). At the requested time, the page number will be displayed at the bottom of the screen.
- To view this page, press S / P .
- To cancel the request, first ensure that the teletext page is displayed, then press S / P (TP OFF).

1.4. OPERATING OTHER EQUIPMENT

To view the input picture
Press the S / P button repeatedly until the desired input signal indication appears on the screen.

S / P 1: to view the audio and video signal input through the S / P -1 connector on the rear.

S / P 1: to view the RGB signal (i.e. from a computer, etc.) input through the S / P -1 connector.

S / P 2: to view the audio and video signal input through the S / P -2/ E -2 connector on the rear.

S / P 2: to view the S-video signal (from a VTR equipped with an S-video output) input through the S / P -2/ E -2 connector.

S / P 3: to view the audio and video signal input through the S / P -3 connectors and the audio input jacks (yellow, white and red) on the front.

S / P 3: to view the S video signal input through the S / P -3 connectors on the front (4-pin connector and white and red phone jacks).

You can also select the desired input mode using the buttons on the front of the set. Select the S mode with the mode select ($\text{P} \rightarrow \text{A} \rightarrow \text{S}$) button C then press $+/-$ button.

To return to the TV mode, press the TV -button.

To select the signal to be output from the S / P -2/ E -1 connector
Press the S / P button D repeatedly until the desired output source is indicated on the screen:

S / P 1 S : The audio and video signal input through the S / P -1 connectors is output from the S / P -2/ E -1 connector.

S / P 2 S : The audio and video signal input through the S / P -2/ E -2 connector is output from the S / P -2/ E -2 connector.

S / P 3 S : The audio and video signal input through the S / P -3 connector is output from the S / P -2/ E -3 connector.

S / P : The audio and video signal input through the S / P - connector is output from the S / P -2/ E - connector.

S / P : The audio and video signal input through the S / P -1 connector is output from the S / P -2/ E -1 connector.

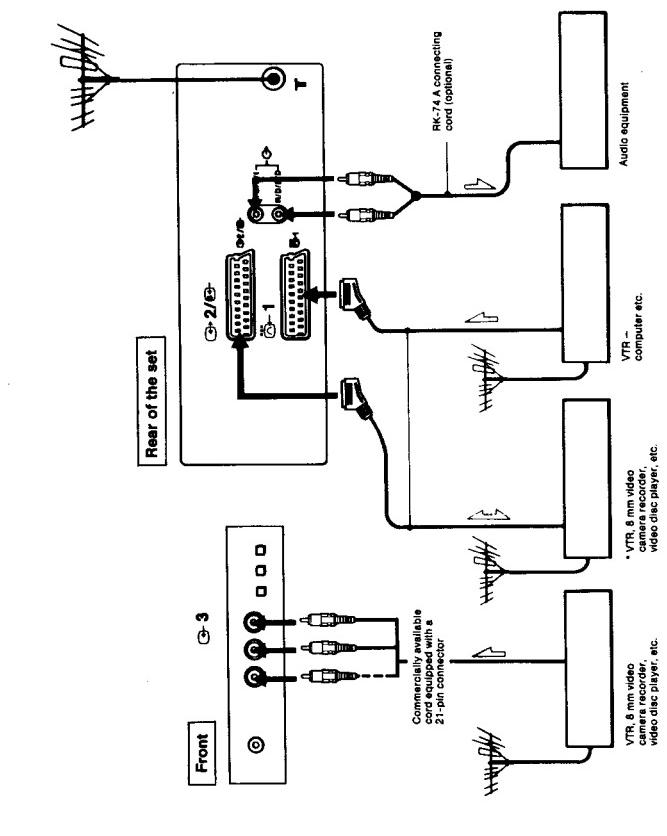
The indication will disappear after a few seconds.

Note

The TV-signal is always output at the EURO-AV connector S / P -1.

1-5. CONNECTING OTHER EQUIPMENT

1-6. RECEIVABLE CHANNELS AND CHANNEL DISPLAY



ITALY		
PAL B/G	Receivable channels	Channel displays
E 2	C 02	A
3	C 03	B
4	C 04	C
		D
12	C 12	E
21	C 21	F
		G
69	C 69	H
		I
		J
		K
		L
		M
		N
		O
		P
		Q
		R
		S
		T

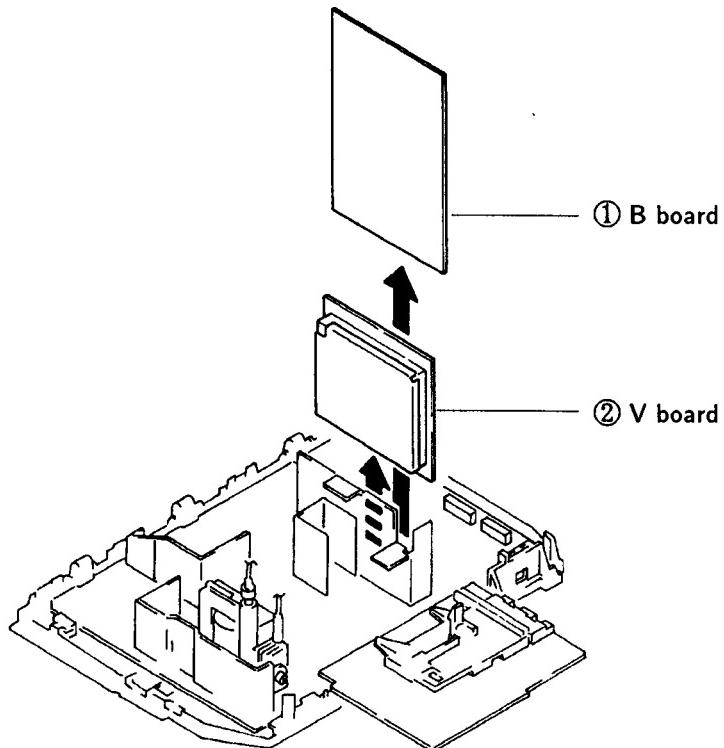
CABLE TV (2)		
PAL B/G	Receivable channels	Channel displays
S 01	S 42	
S 05	S 46	
M 1	S 01	
M 10	S 10	
U 1	S 11	
U 10	S 20	

FRENCH CABLE TV		
PAL B/G	Receivable channels	Channel displays
S 01	S 01	
2	S 02	
41	S 41	
M 10	S 10	
U 1	S 11	
U 10	S 20	

PAL-I UK		
PAL-I UK	Receivable channels	Channel displays
A	C 01	
B	C 02	
C	C 03	
D	C 04	
E	C 05	
F	C 06	
G	C 07	
H	C 08	
J	C 09	
21	C 21	
69	C 69	

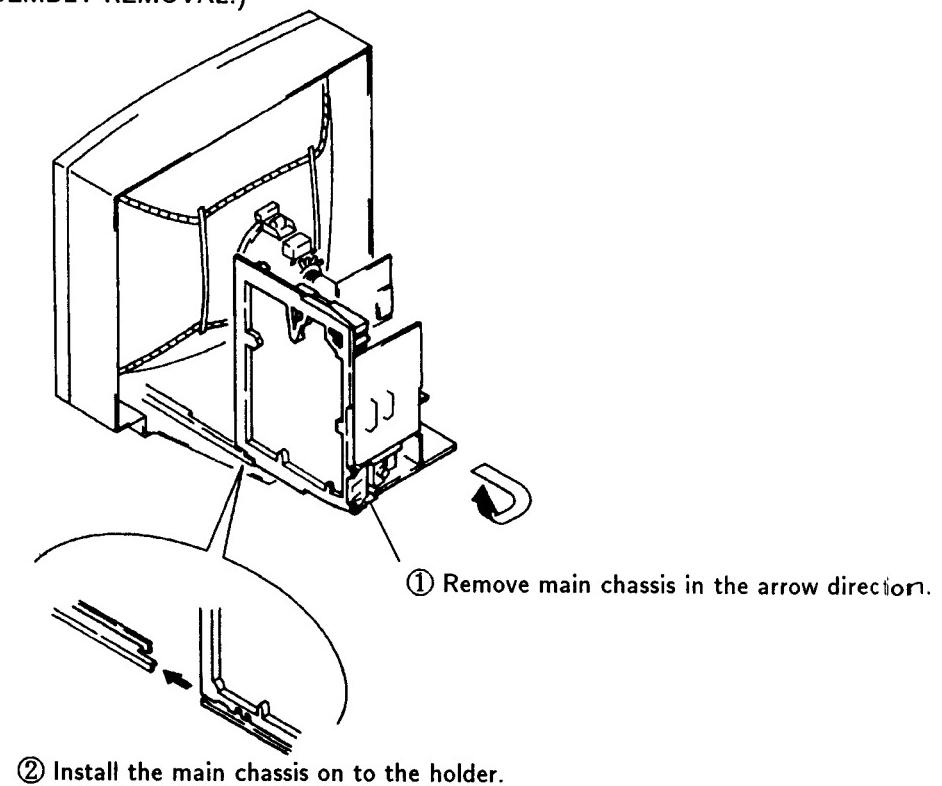
- S video Input (Y/C input) \ominus :**
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Usually these two signals are combined in a VTR and output as one signal, and supplied to a TV. Separation of the Y and C signals prevent them from interfering with one another, thereby improving picture quality (especially in luminance). This set is equipped with a S video input through which these separated signals can be input directly.
- Connect the S video output jack on the VTR to the S video input on this set.
- Notes**
- It is also possible to connect a VTR using the T terminal. In this case, connect the aerial to the aerial terminal of the VTR.
 - Move the VTR away from the TV if the picture or the sound is distorted.
 - Computers which have RGB output only can be connected to the \ominus -1 input connector.

2-4. B AND V BOARDS REMOVAL



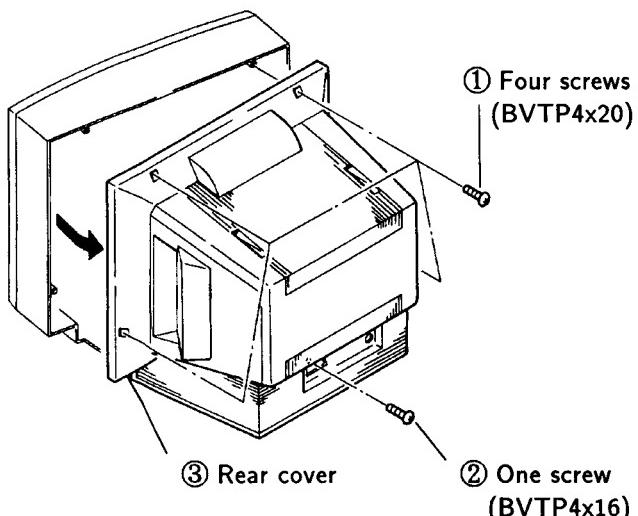
2-5. SERVICE POSITION

* Remove the connector bracket and then perform the following servicing.
(Refer to 2-2. CHASSIS ASSEMBLY REMOVAL.)



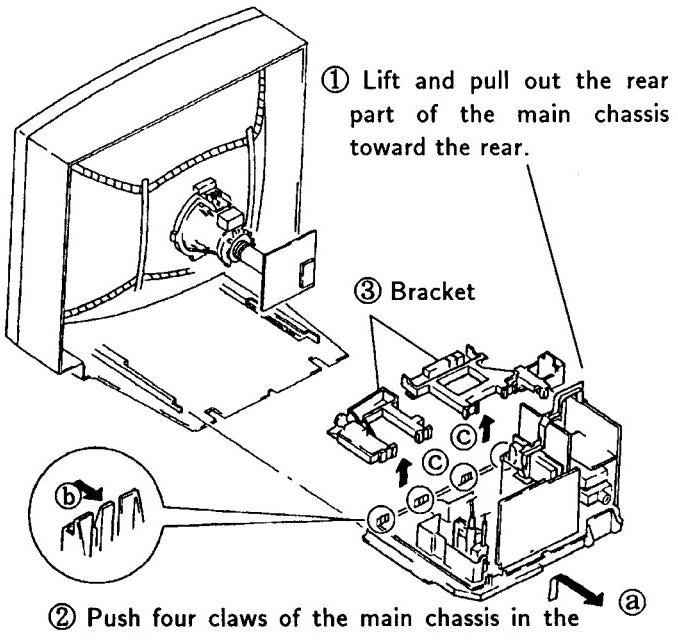
SECTION 2 DISASSEMBLY

2-1. REAR COVER REMOVAL



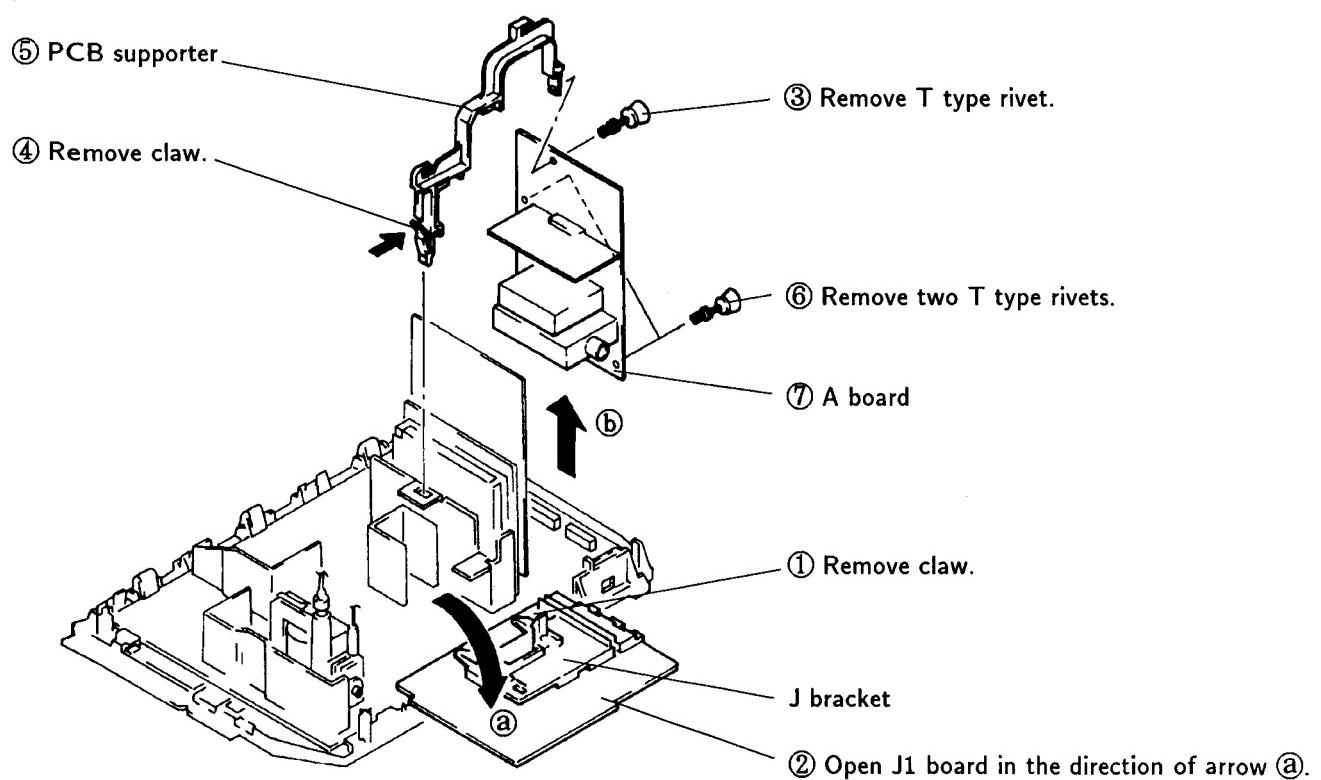
- ① Pull the rear cover and turn the right the speaker leads a fixed by the pathlock on the chassis.
- ② When attaching the rear cover for the speaker leads by pathlock.

2-2. CHASSIS ASSEMBLY REMOVAL

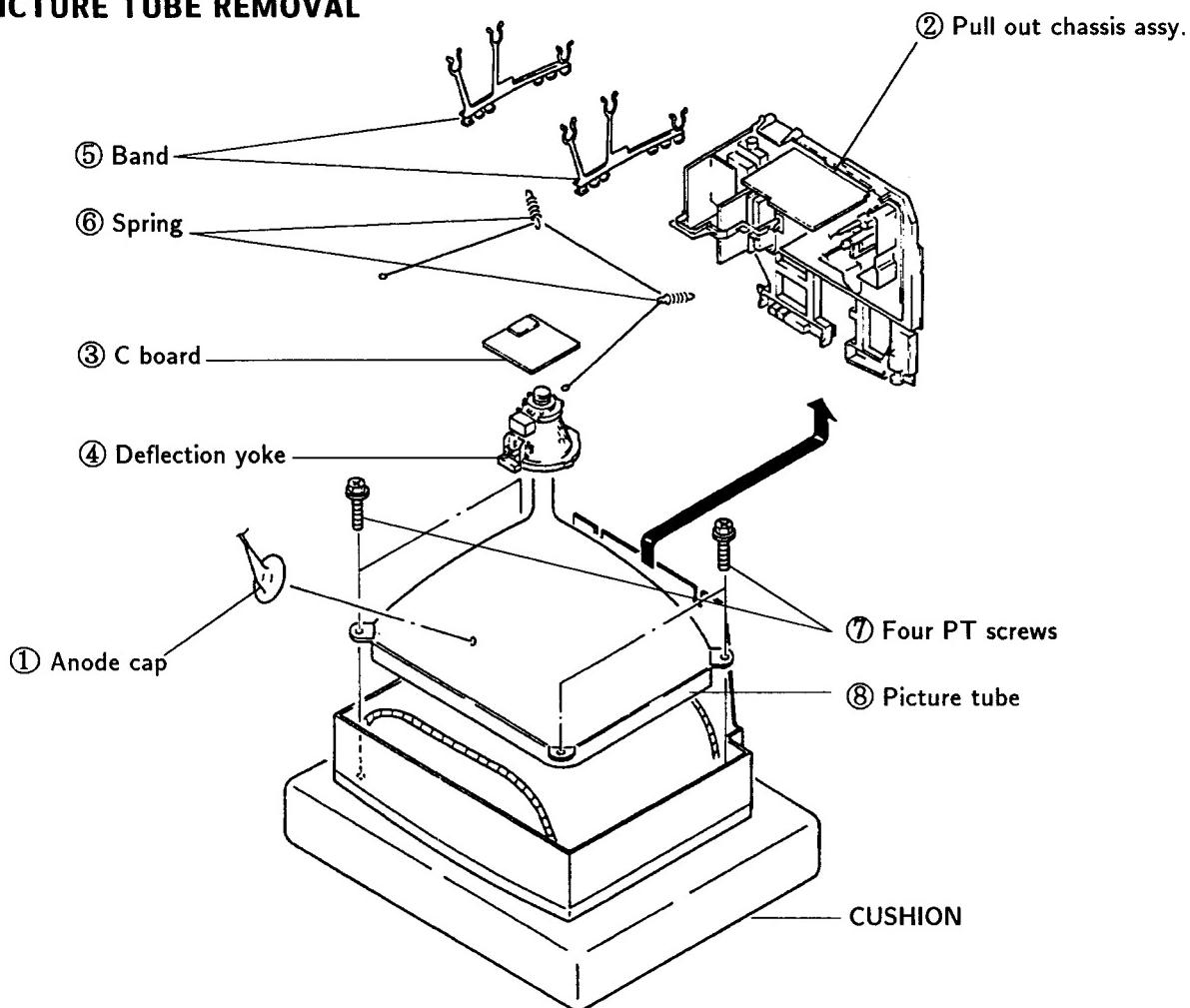


- ① Lift and pull out the rear part of the main chassis toward the rear.
- ② Push four claws of the main chassis in the direction of arrow and remove the bracket.

2-3. A AND J1 BOARD REMOVAL

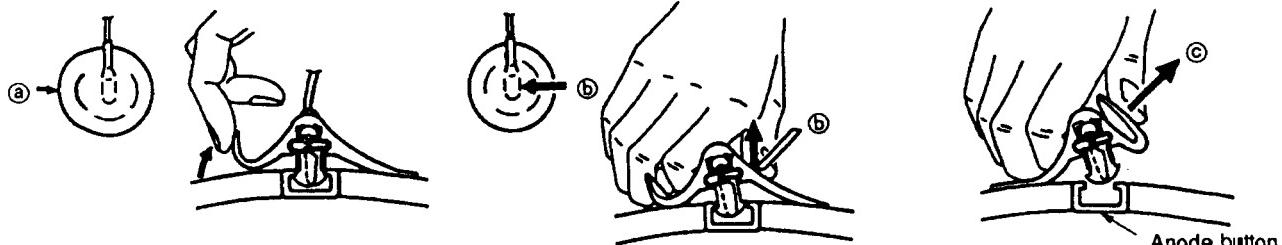


2-6. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

• REMOVING PROCEDURES



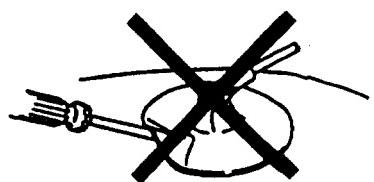
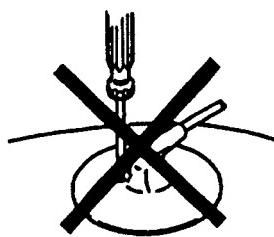
① Turn up one side of the rubber cap in the direction indicated by the arrow ②.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ③.

③ When one side of the rubber cap is separated from the anode button, the snode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ④.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3 SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :
 - Contrast 80%
 - (or remote control normal)
 - Brightness 50%

- Carry out the following adjustments in this order:
1. Beam landing
 2. Convergence
 3. Focus
 4. White balance

Note: Testing equipment required

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
Contrast }
Brightness } normal
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
(See Figures 3-1 through 3-3.)
4. Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it.
(See Figure 3-4.)

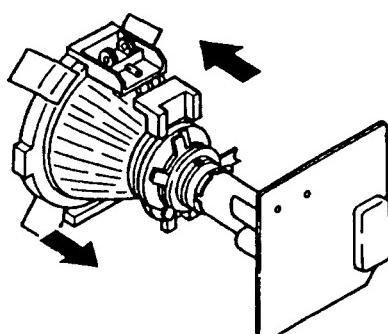


Fig. 3-1

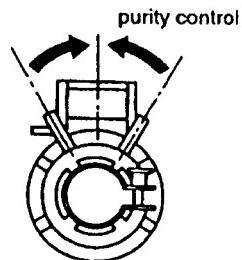


Fig. 3-2

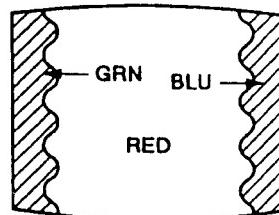


Fig. 3-3

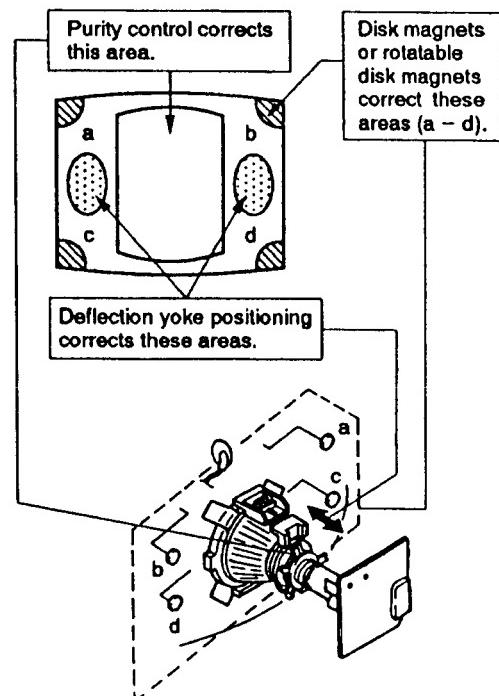


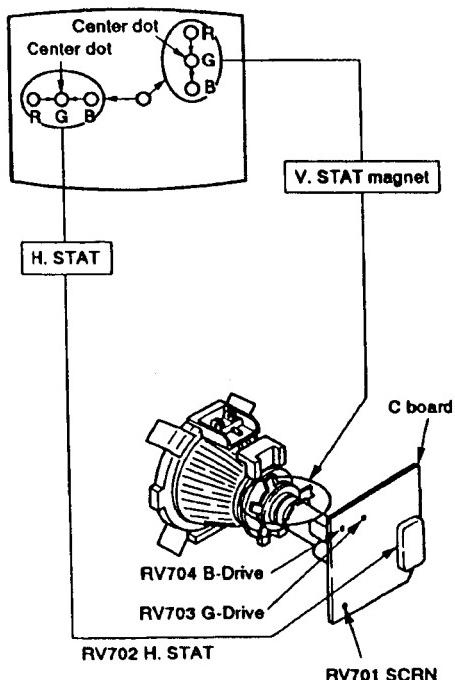
Fig. 3-4

3-2. CONVERGENCE

Preparations :

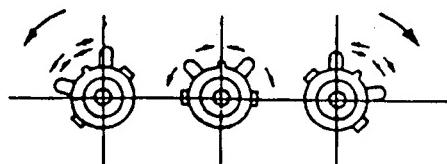
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence

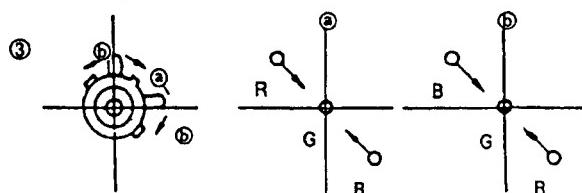
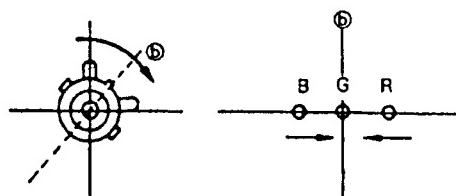
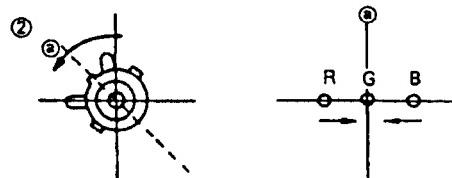
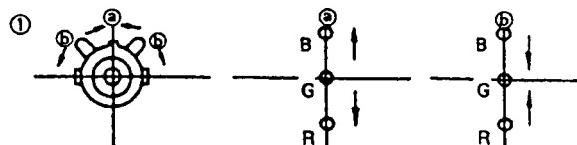


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor can not bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other's settings.)

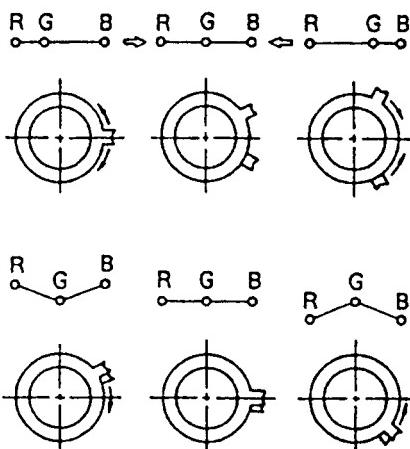
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the ② and ③ arrows, the red, green, and blue points move as shown below.

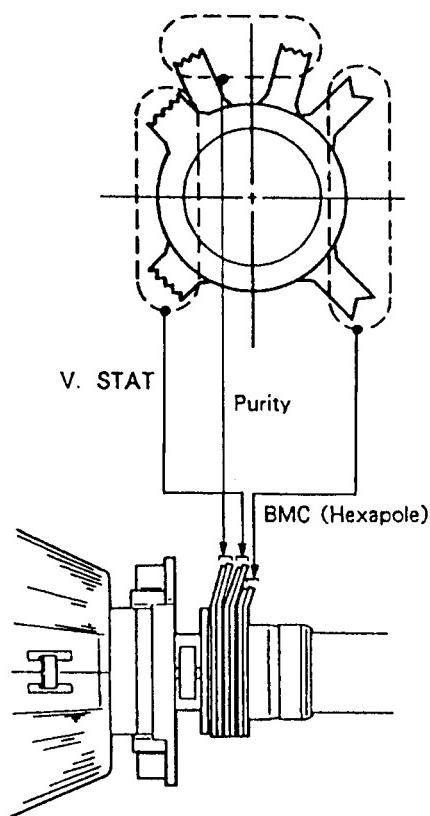


- Operation of BMC (Hexapole) Magnet



- The respective dot operations resulting from the operation of each magnet are not completely independent, so be sure to perform adjustment while tracking.

Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



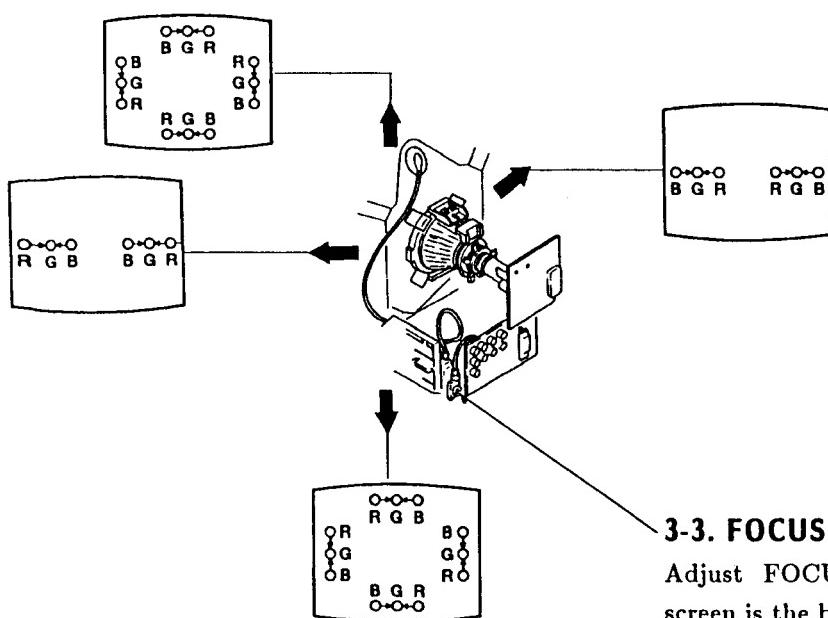
(2) Dynamic convergence adjustment

Preparations :

Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

- Slightly loosen the deflection yoke screws.
- Remove the deflection yoke spacer.

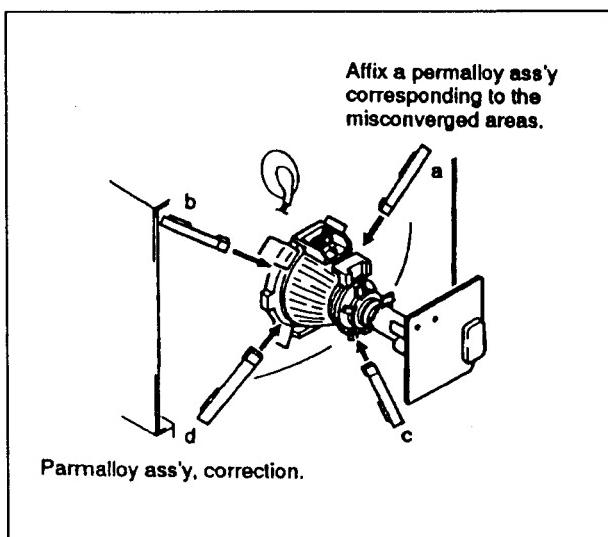
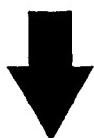
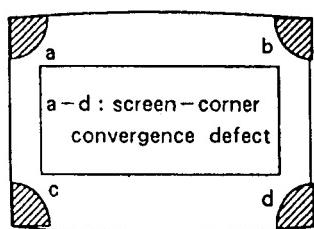
- Move the deflection yoke as shown in the figure below and optimize the convergence.
- Tighten the deflection yoke screws.
- Install the deflection yoke spacer.



3-3. FOCUS

Adjust FOCUS so that the whole screen is the best focus.

(3) Screen corner convergence



3-4. WHITE BALANCE

[Screen G2 setting]

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 170V DC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

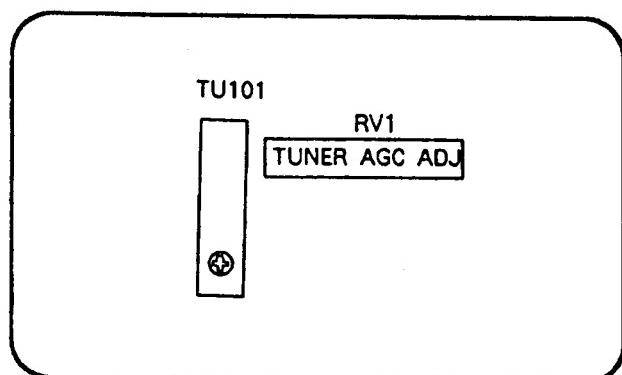
[White balance adjustment]

1. Input an all-white signal from the pattern generator.
2. Set the picture brightness and color controls to their normal levels.
3. Use the RV704 (B Drive) and RV703 (G Drive) to adjust white balance.

In the adjustments below, have the picture color and brightness settings at their normal levels unless there is a specific instruction to the contrary.

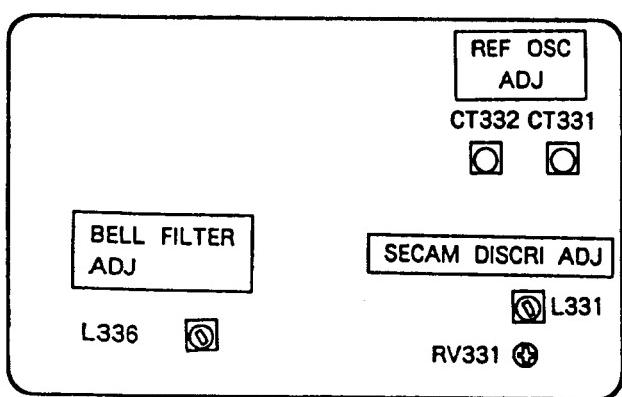
SECTION 4 CIRCUIT ADJUSTMENTS

4-1. A BOARD ADJUSTMENT



(COMPONENT SIDE)

4-2. B BOARD ADJUSTMENTS



(COMPONENT SIDE)

REFERENCE OSCILLATOR ADJUSTMENT (CT332 8.8MHz)

1. Input a PAL color bar signal.
2. Ground pin ⑯ of the IC331.
3. Adjust CT332 to obtain synchronization.

REFERENCE OSCILLATOR ADJUSTMENT (CT331 7.16MHz)

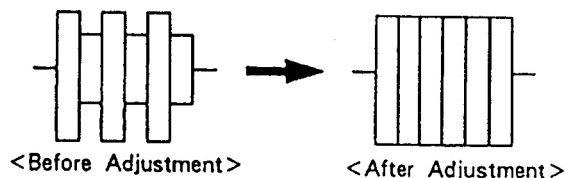
1. Input an NTSC color bar signal.
2. Ground pin ⑯ of IC331.
3. Adjust the CT331 to obtain synchronization.
4. Remove the jumper grounding pin ⑯ of IC331.

TUNER AGC ADJUSTMENT (VIF101, RV1)

1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

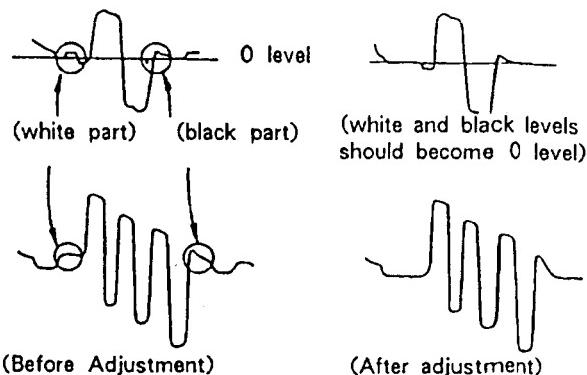
BELL FILTER ADJUSTMENT (L336)

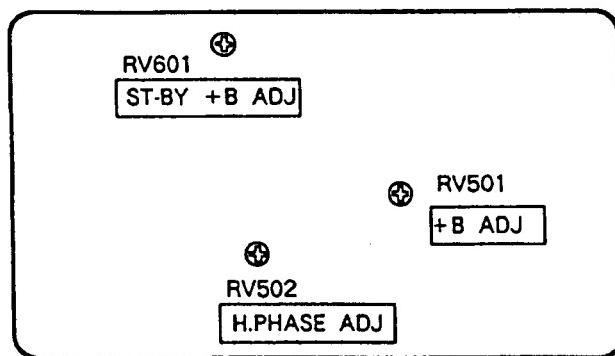
1. Input a SECAM color bar signal.
2. Connect the oscilloscope to the emitter of Q335.
3. Adjust L336 so that the waveform is flat.



DISCRIMINATION ADJUSTMENT (RV331 and L331)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to pin ① of IC331.
3. Adjust RV331 so that the white and black sections of the waveform at pin ① come to the 0 level.
4. Connect the oscilloscope to pin ③ of IC331.
5. Adjust L331 so that the white and black sections of the waveform at pin ③ come to the 0 level.



4-3. D BOARD ADJUSTMENTS**+B ADJUSTMENT (RV501)**

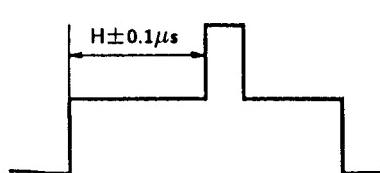
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain $135 \pm 0.2V$.

ST-BY +B ADJUSTMENT (RV601)

1. Put the system into \odot standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain $135 \pm 3V$.
4. Take the system out of \odot standby mode (remote commander).

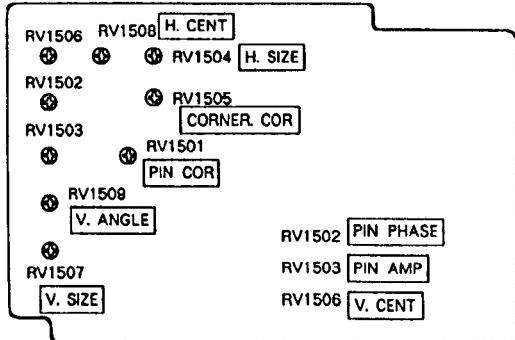
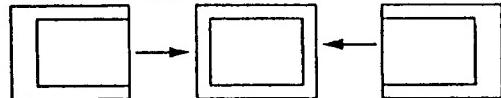
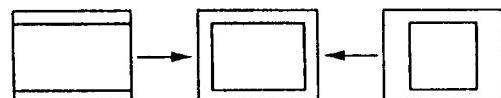
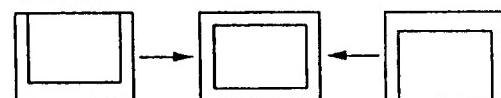
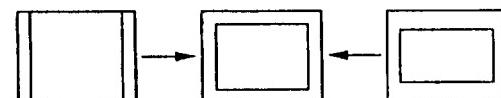
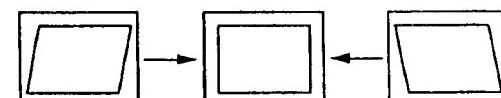
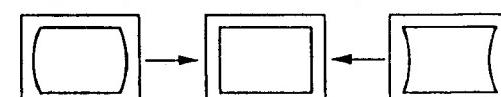
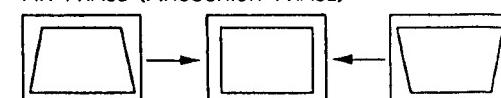
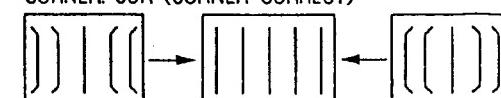
H.PHASE ADJUSTMENT (RV502)

1. Input a PAL color bar signal.
 2. Set the picture and brightness controls to their normal levels.
 3. Set RV1508 (H.CENT) to its mechanical center.
 4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
 5. Rotate RV502 to adjust to $H \pm 0.1\mu s$.
- See below table for the H value.

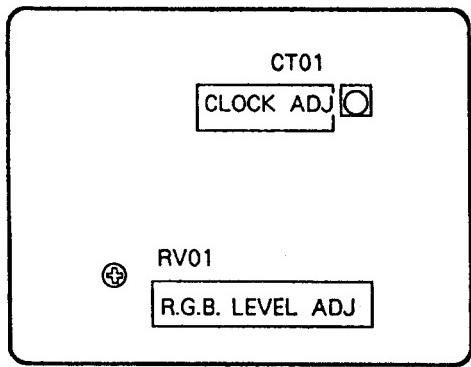


Standard of H.Phase

Model Size	H
21"	$5.6\mu s$
25"	$5.1\mu s$
29"	$5.5\mu s$

4-4. J1 BOARD ADJUSTMENTSRV1508
H. CENT (HORIZONTAL CENTER)RV1504
H. SIZE (HORIZONTAL SIZE)RV1506
V. CENT (VERTICAL CENTER)RV1507
V. SIZE (VERTICAL SIZE)RV1509
V. ANGLE (VERTICAL ANGLE)RV1503
PIN AMP (PINCUSHION AMPLIFIER)RV1502
PIN PHASE (PINCUSHION PHASE)RV1501
PIN. COR (PINCUSHION CORRECT)RV1505
CORNER. COR (CORNER CORRECT)

4-5. V BOARD ADJUSTMENTS



CLOCK ADJUSTMENT (CT01)

1. Remove the V-1 connector.
2. Put the system into text mode.
3. Adjust CT01 so that the picture does not move.

RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

4-6. SECONDARY ADJUSTMENT

SUB BRIGHTNESS ADJUSTMENT

1. Set the system to receive a test pattern.
2. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.
3. Switch off the power.
4. While depressing the adjusting buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
5. Minimize the \odot contrast setting.
6. Adjust the \odot brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
7. Depress the \diamond (store) button of the remote commander.

(SUB mode is released)

If there is no test color pattern

1. Set the system to receive a color pattern.
2. Press on the remote commander to put system into normal mode.

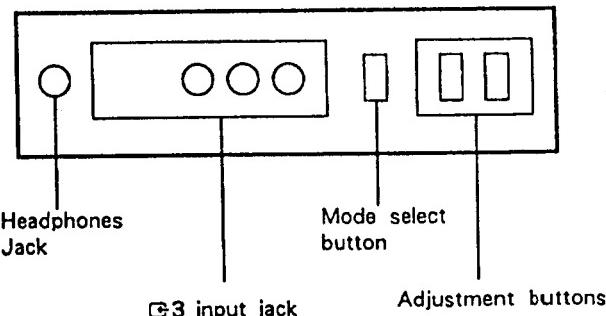
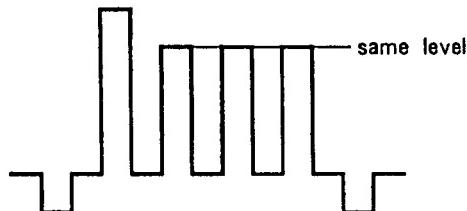
Set the \odot color to its normal state.

3-5. are the same as above.

6. Since 20 IRE is nearly blue, adjust the \odot brightness control so that the blue barely glows.
7. is the same as above.
8. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.

SUB COLOR ADJUSTMENT

1. Set the system to receive color bars.
2. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
5. Adjust the color control so that the B out waveform (pin ② of C board connector CNC72) is as shown in the figure below.
6. Depress the \diamond (store) button of the remote commander. (SUB mode is released)

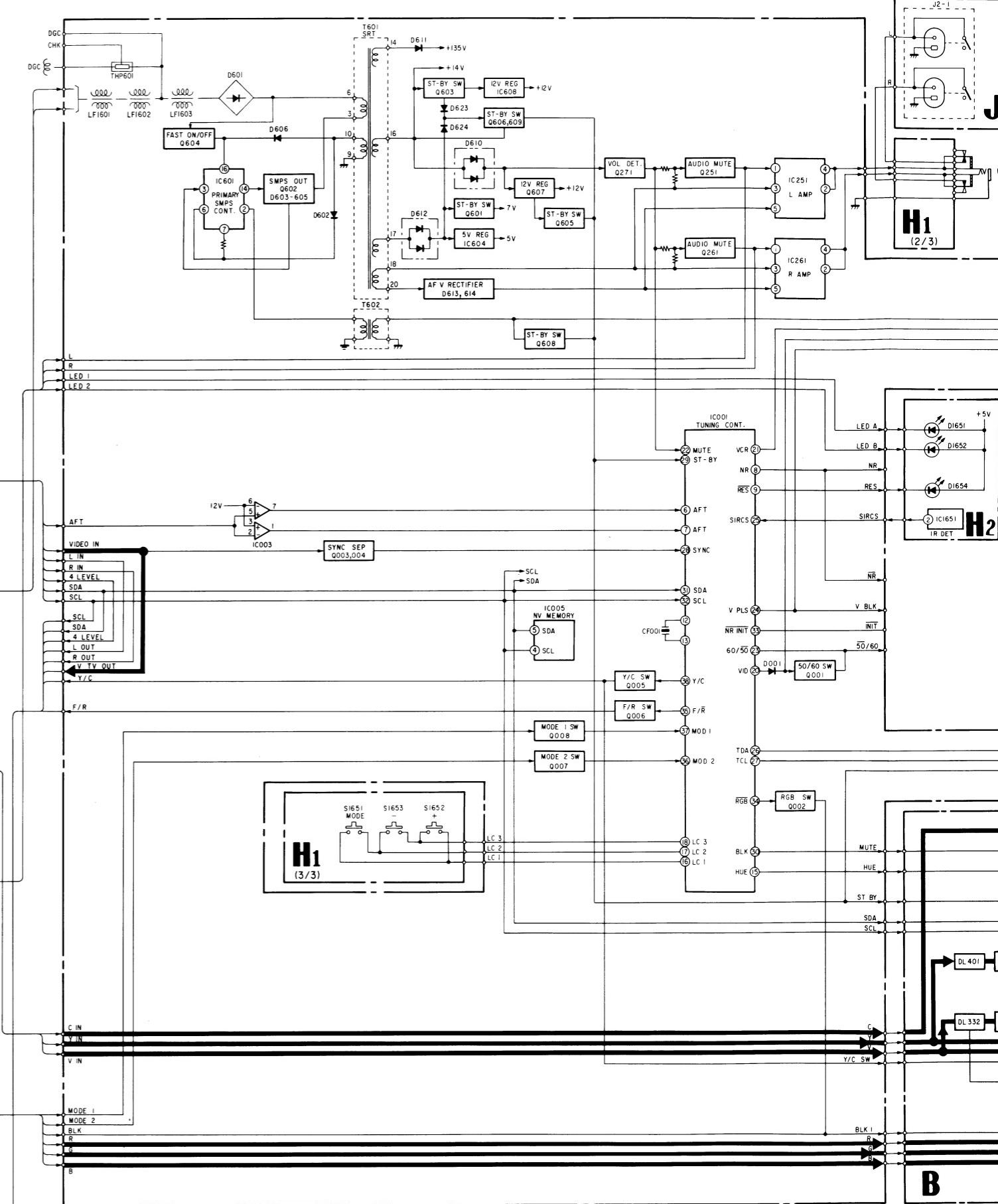
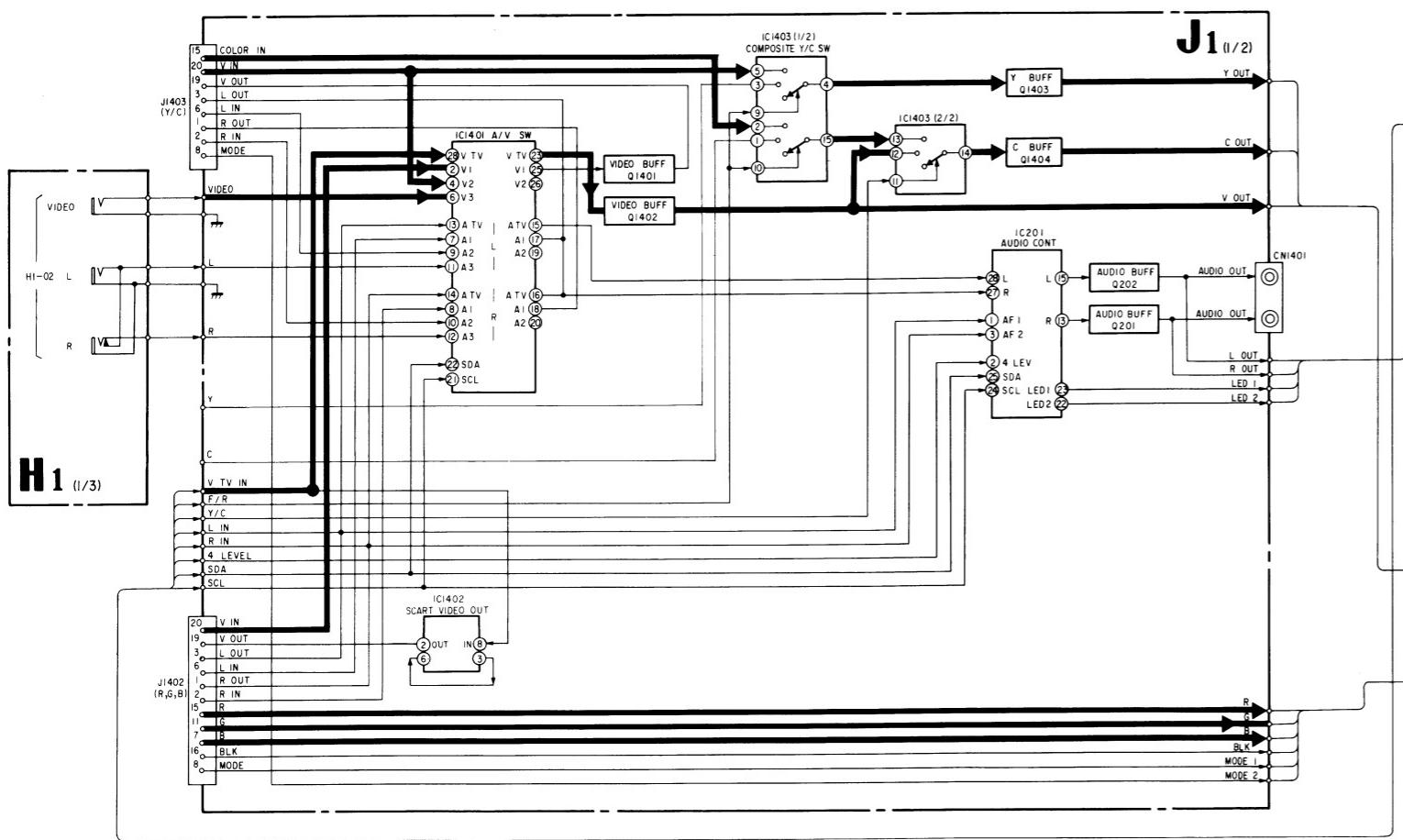
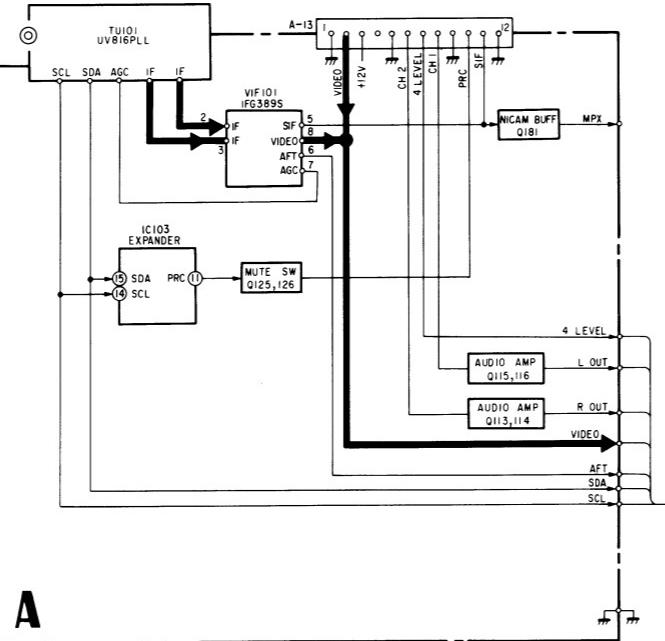
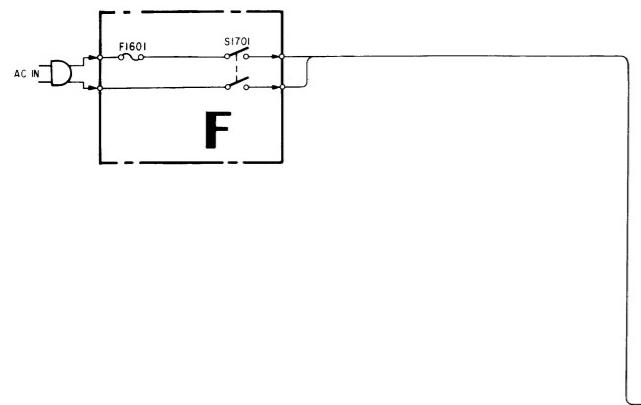


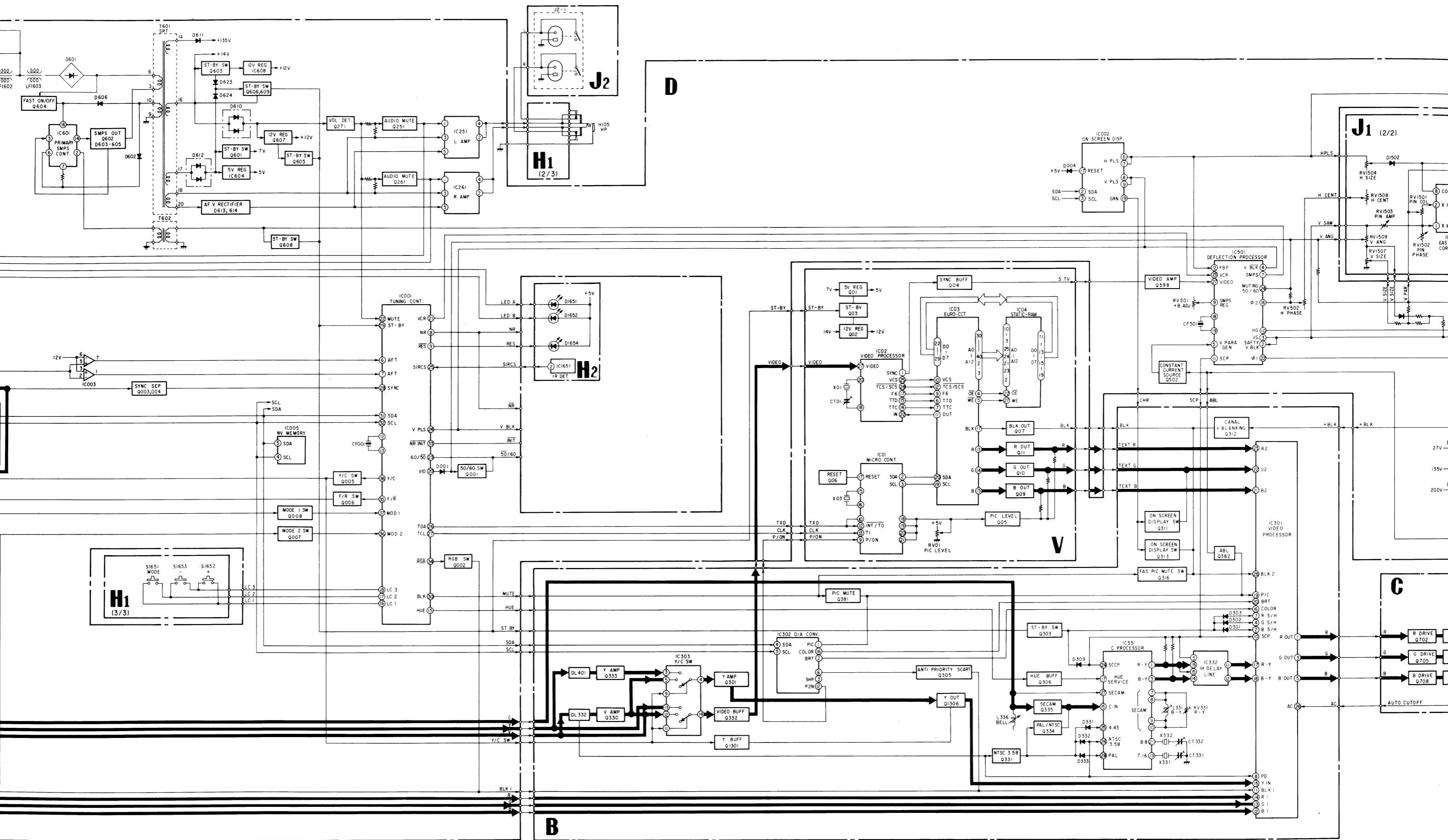
MEMO

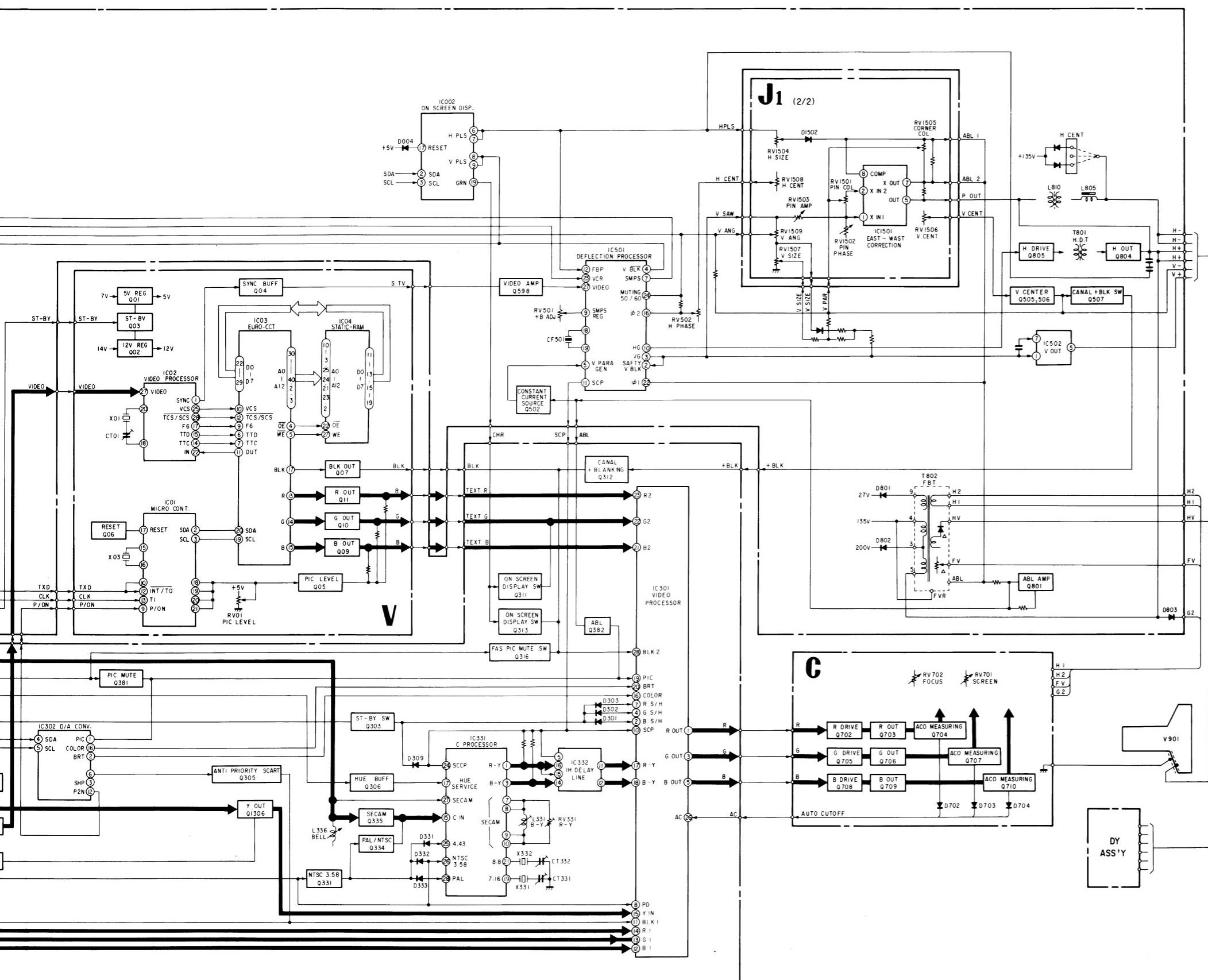
**SECTION 5
DIAGRAMS**

KV-X2131D
RM-689

5-1. BLOCK DIAGRAM



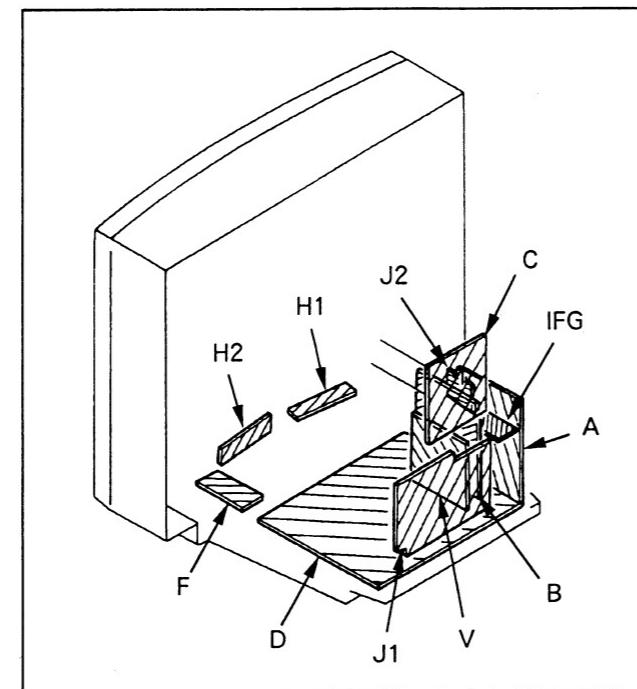




H1 [CONTROL SW,
AV INPUT,
HEADPHONE] **H2** [SIRCS RECEIVER,
INDICATOR]

F [A]

5-2. CIRCUIT BOARDS LOCATION



Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note :

- All capacitors are in μF unless otherwise noted.
 pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power: 1/4W

- Chip resistor is in 1/10W.
- All resistors are in ohms. $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- : nonflammable resistor.
- : fusible resistor.
- \triangle : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B.unless otherwise noted.
- All voltages are in V.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- : B + line.
- : signal path.

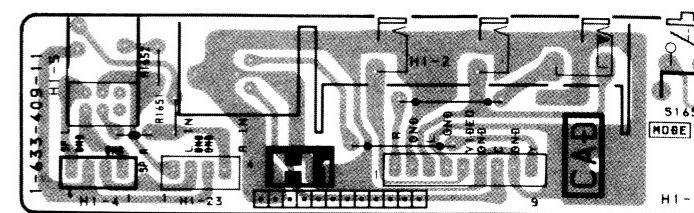
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

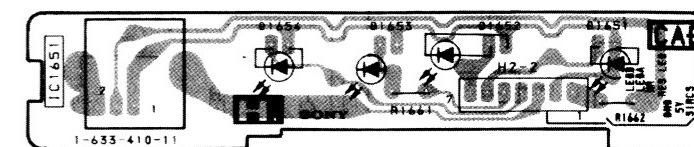
5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

—Conductor Side—

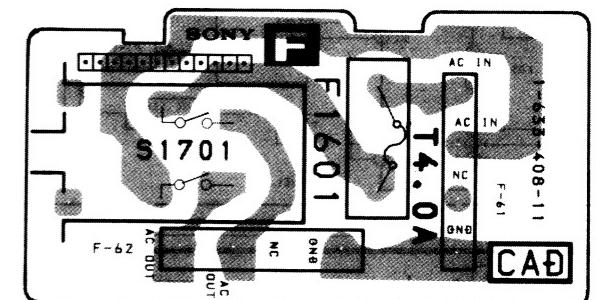
—H1 Board—



—H2 Board—



—F Board—



H1 [CONTROL SW,
AV INPUT,
HEADPHONE]**H2** [SIRCS RECEIVER,
INDICATOR]**F** [AC IN POWER SW]

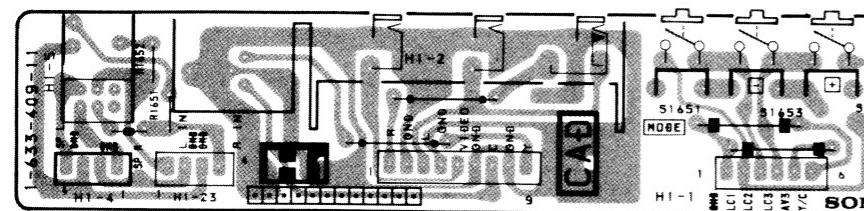
[TUNER, VIF, SIF]

A**J1**

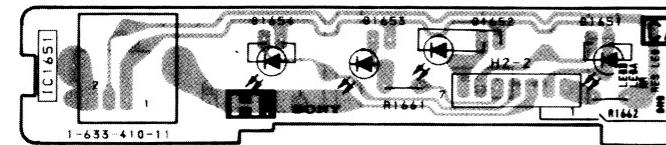
5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Conductor Side

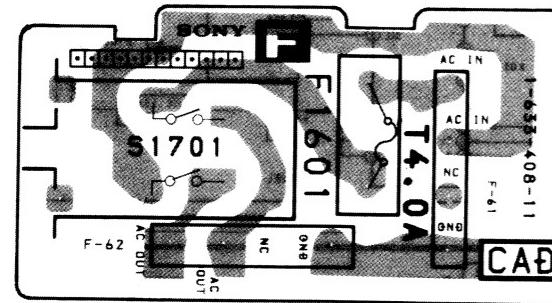
-H1 Board-



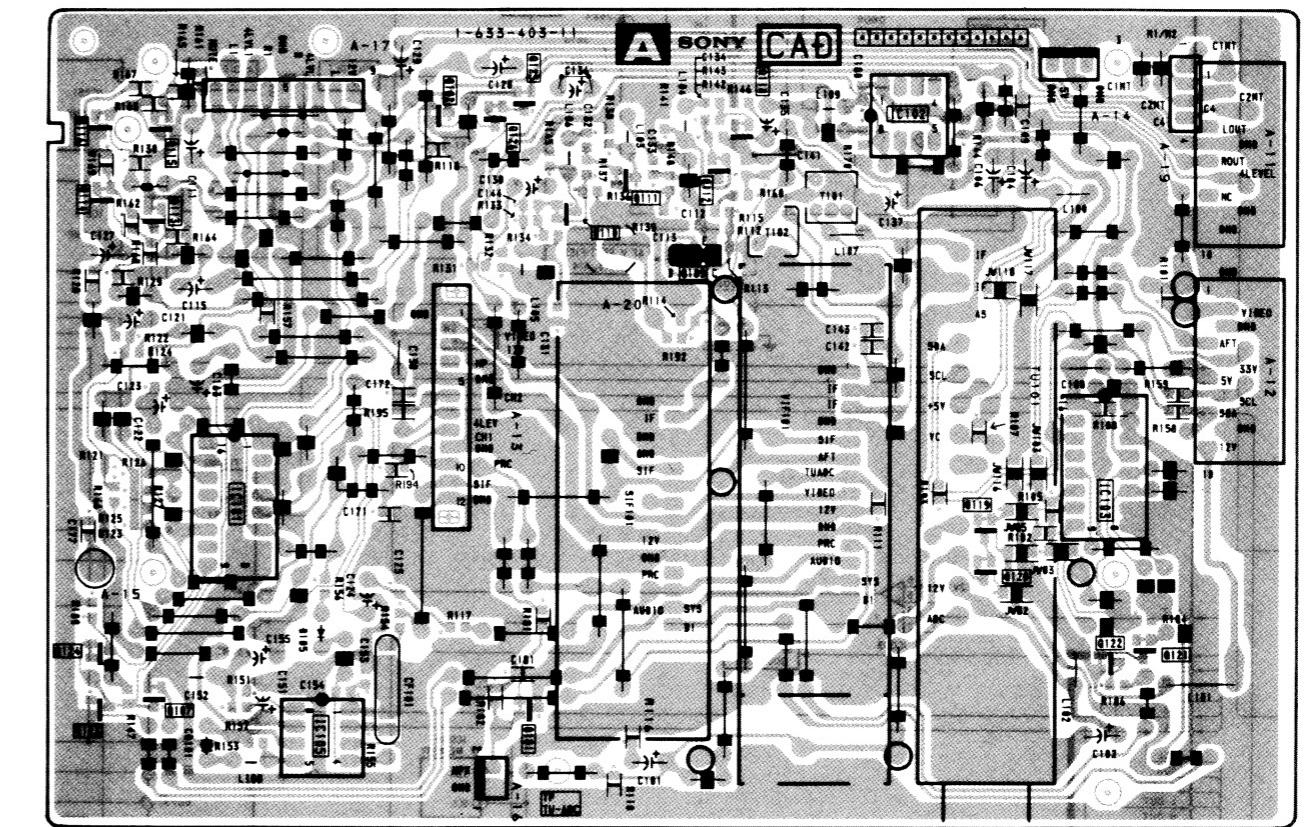
-H2 Board-



-F Board-



-A Board-



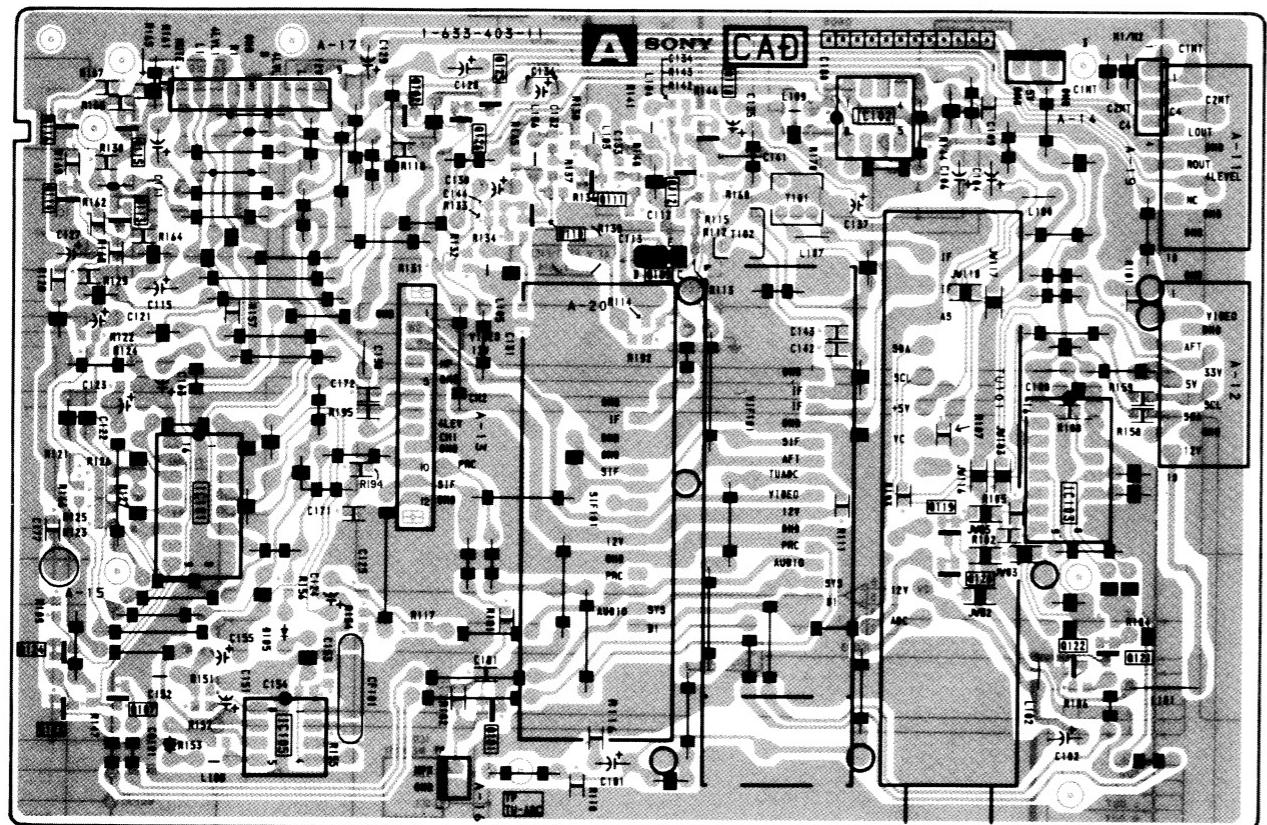
-J1 Boa

-J2 Boa

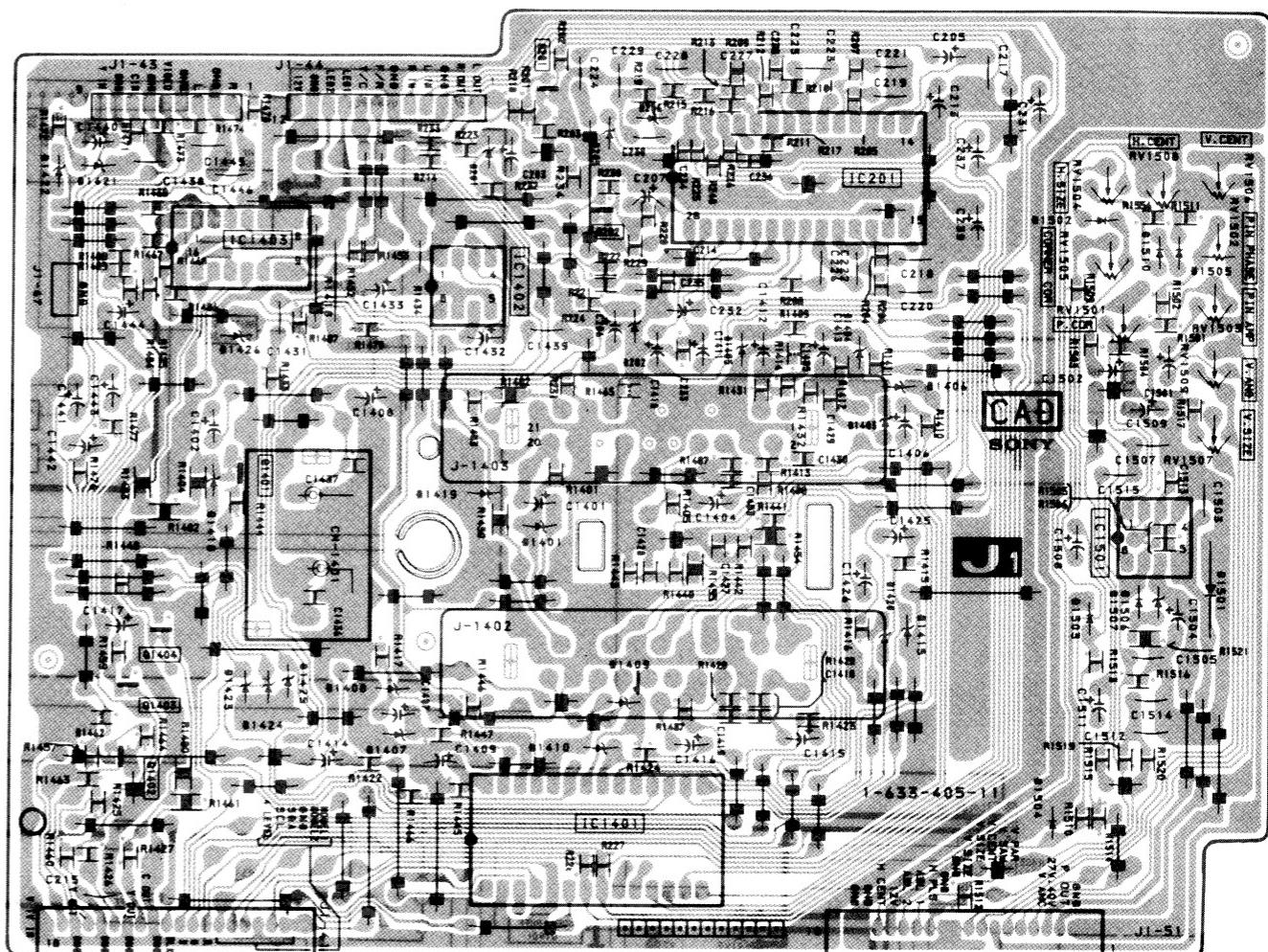
[TUNER, VIF, SIF] A

J1 [AUDIO CONTROL, AV INPUT
Y/C INPUT, SCAR VIDEO OUT
EAST-WEST CORRECTION]J2 [SPEAKER
TERMINAL]

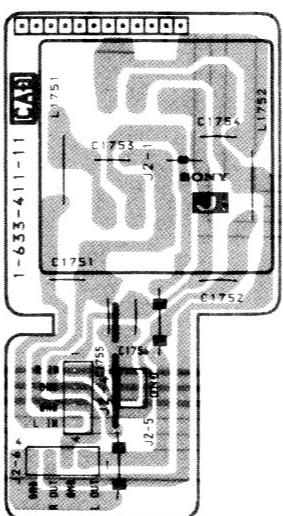
—A Board—

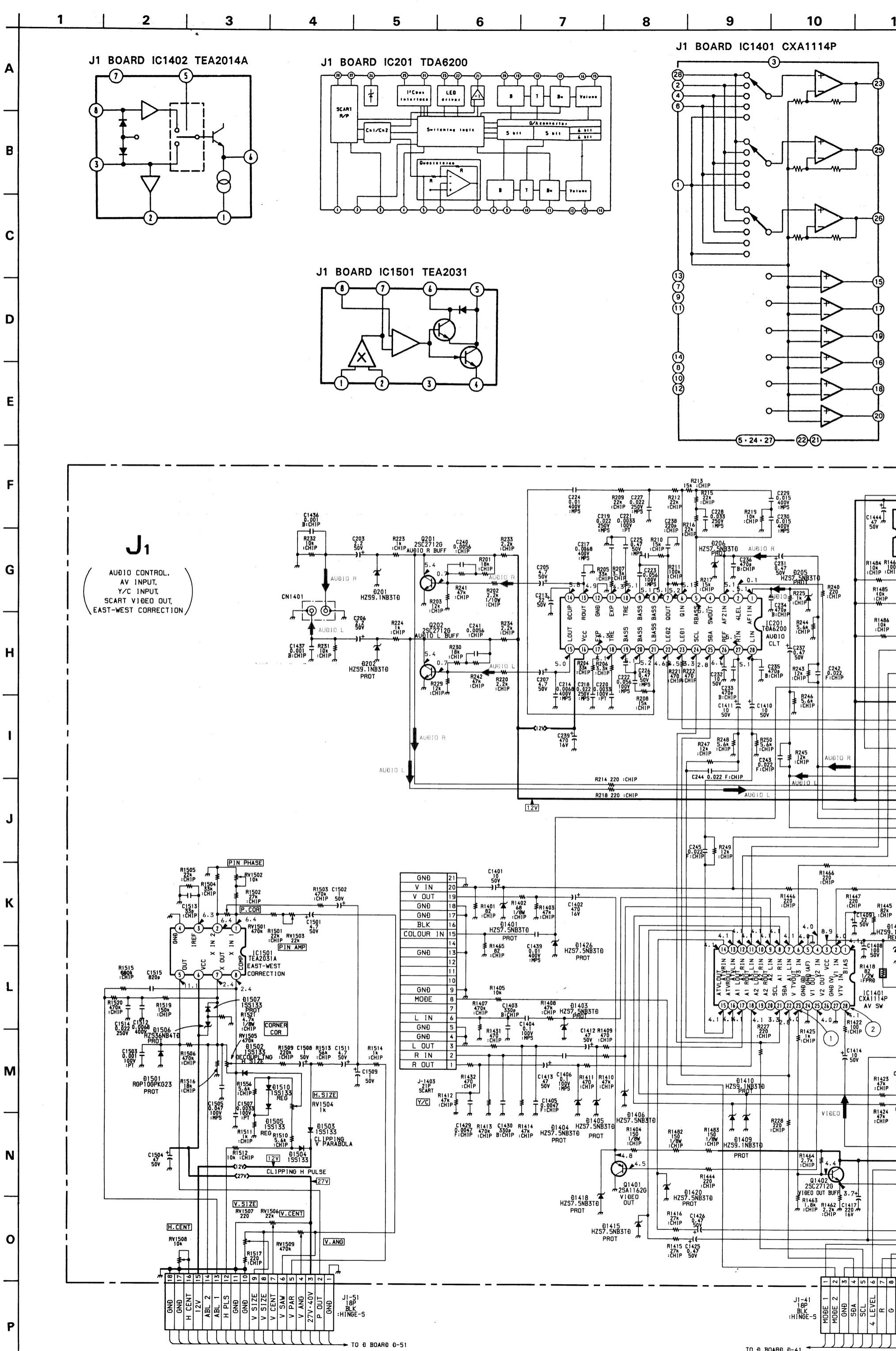


—J1 Board—

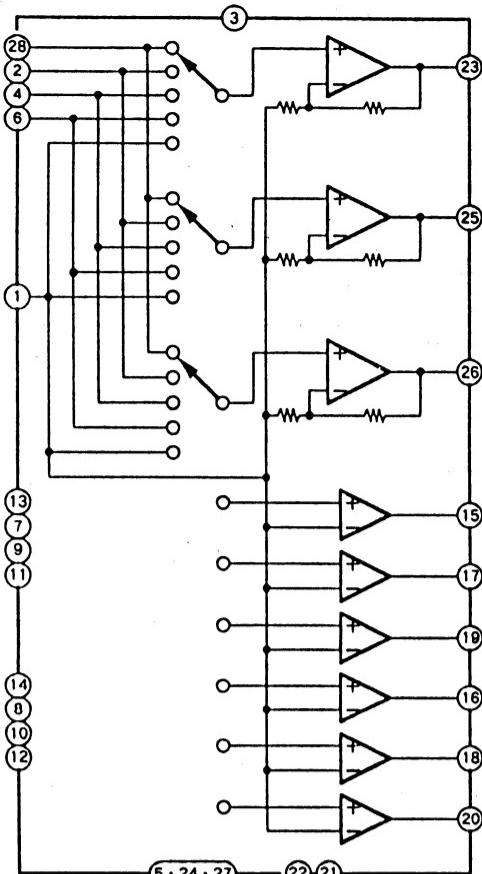


—J2 Board—

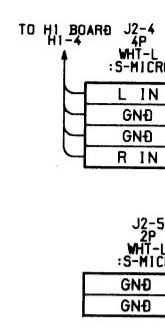
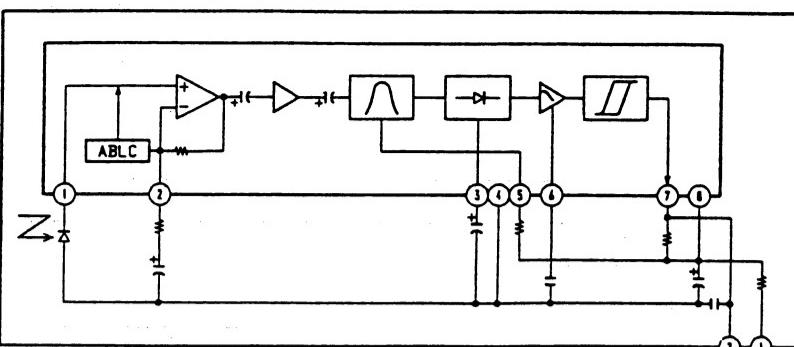




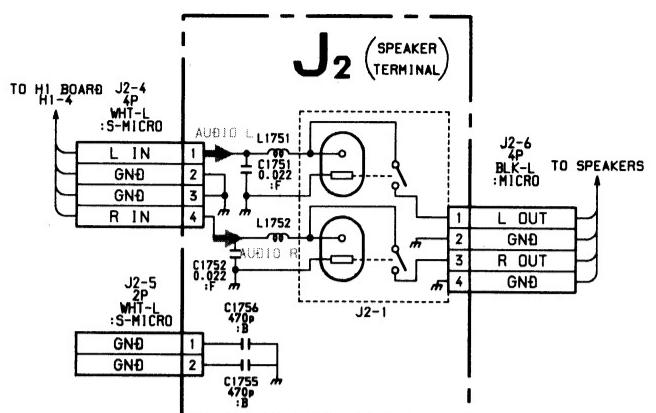
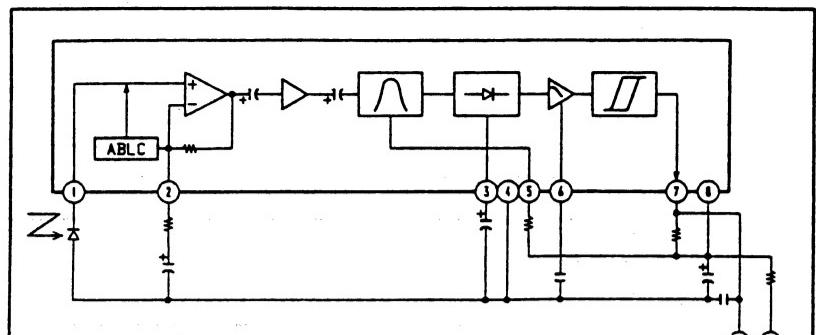
J1 BOARD IC1401 CXA1114P



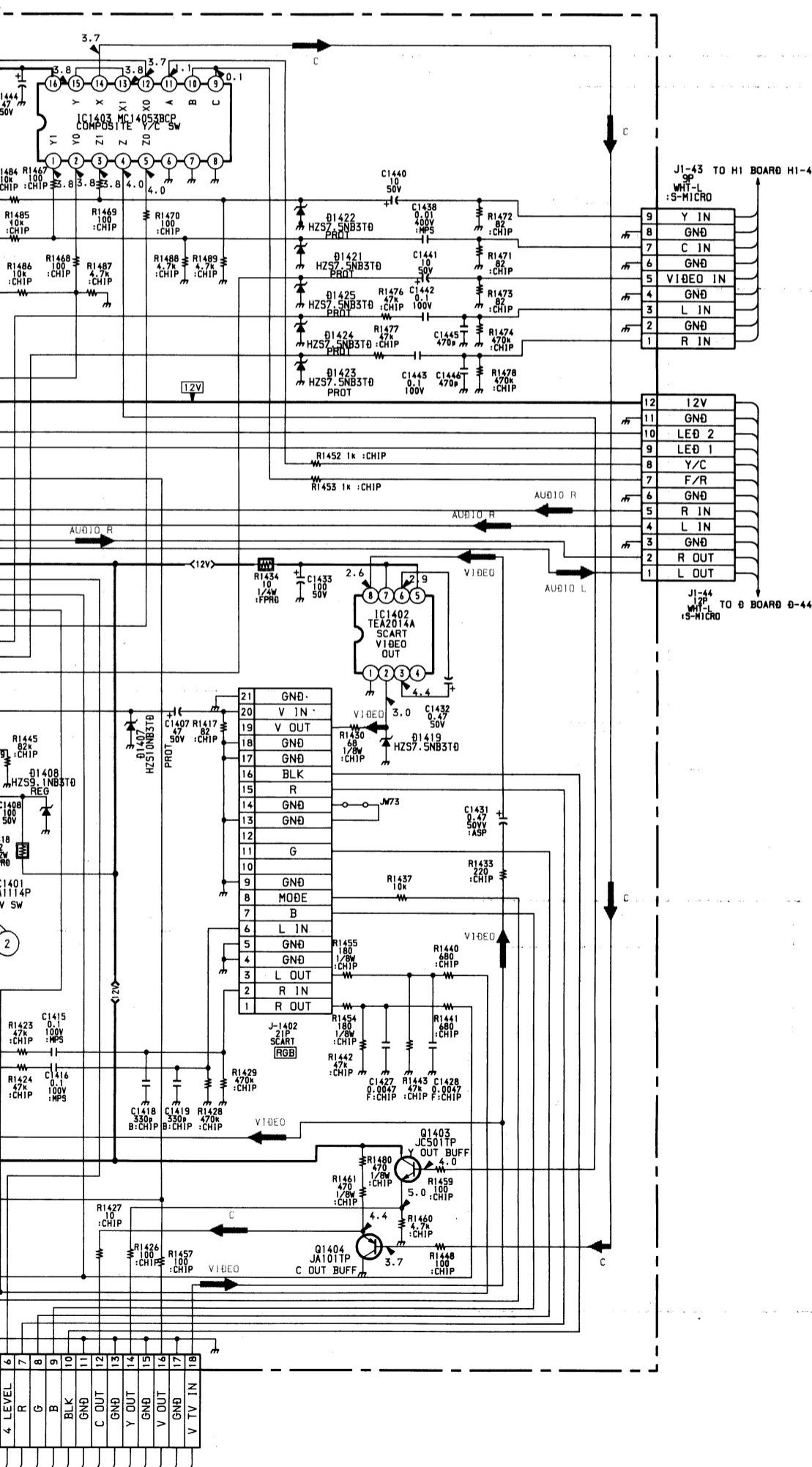
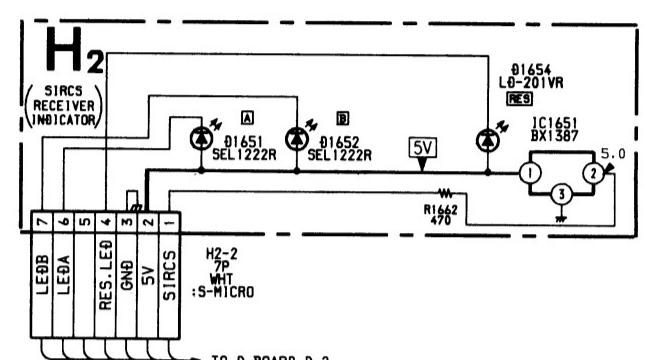
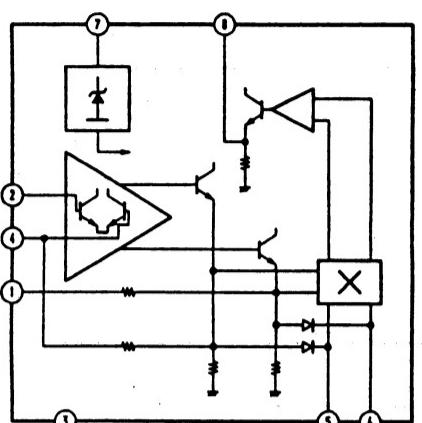
H2 BOARD IC1651 BA1387



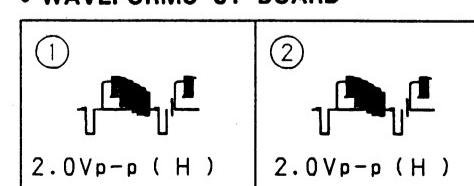
H2 BOARD IC1651 BA1387



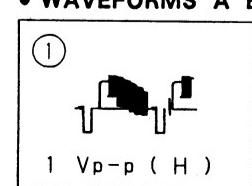
A BOARD IC105 TBA129

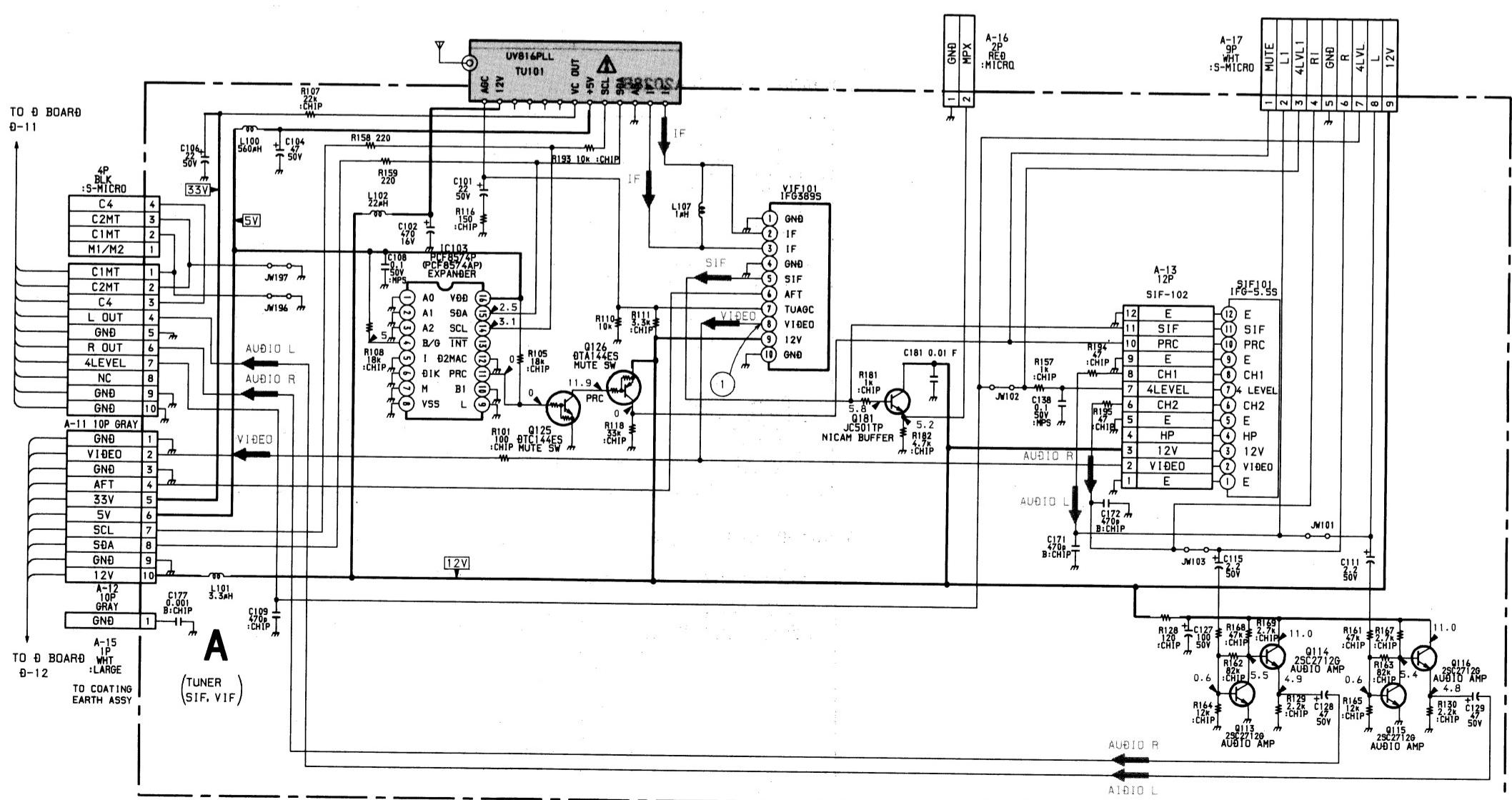
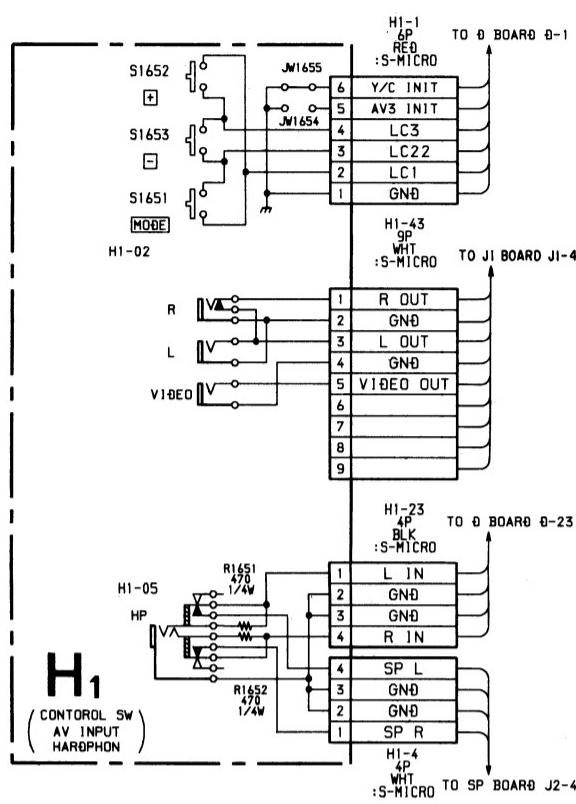
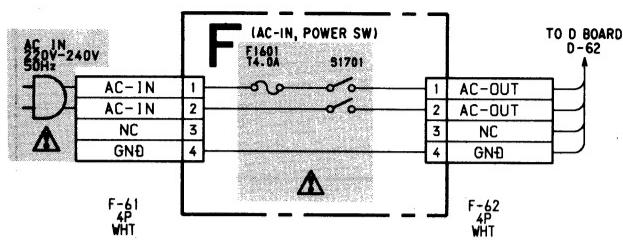


• WAVEFORMS J1 BOARD

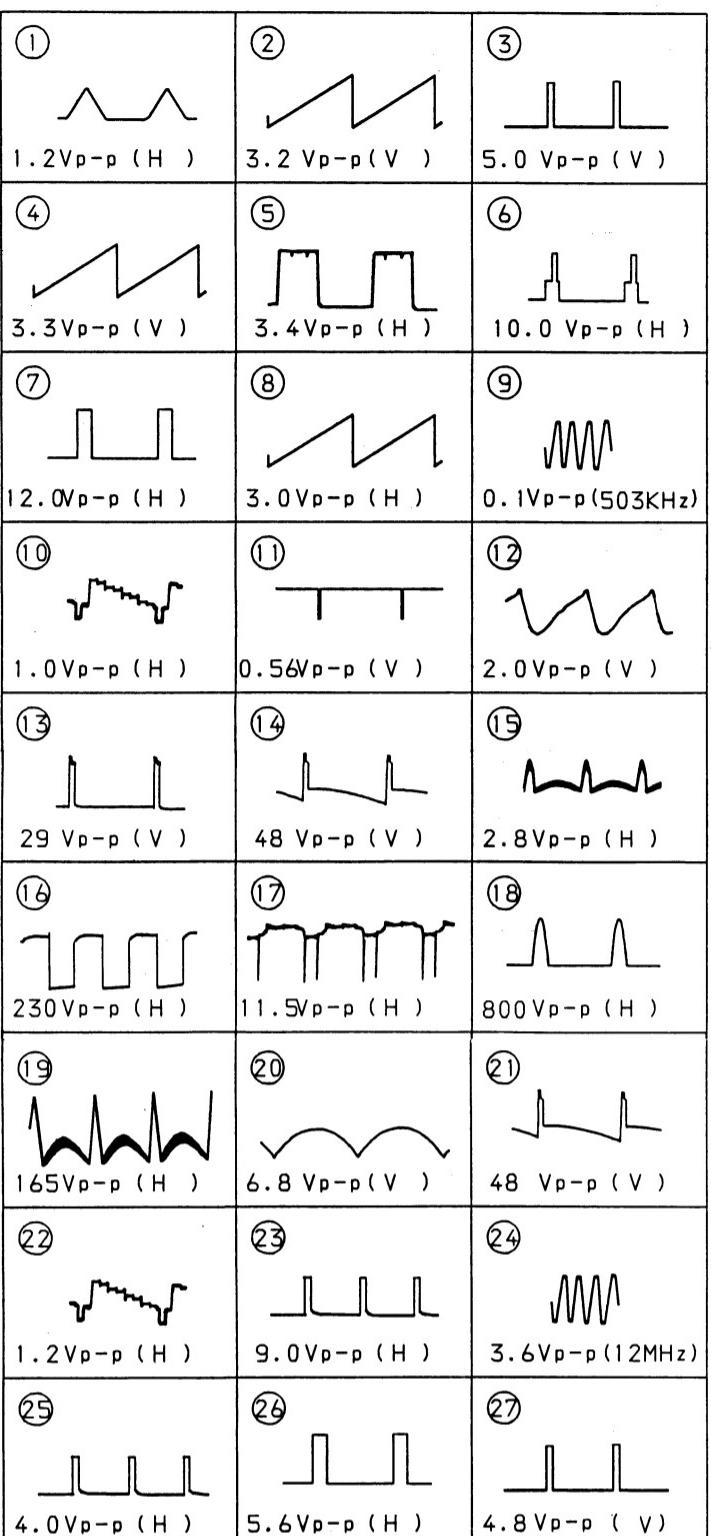


• WAVEFORMS A BOARD

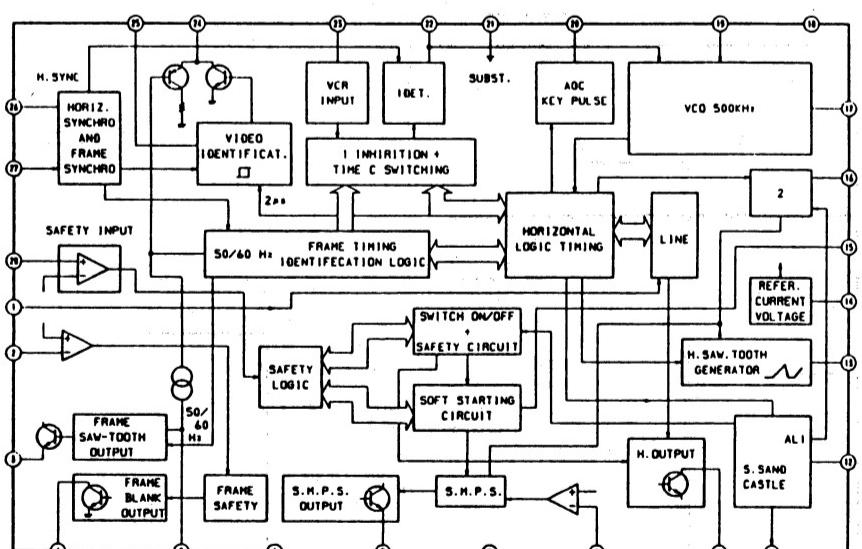




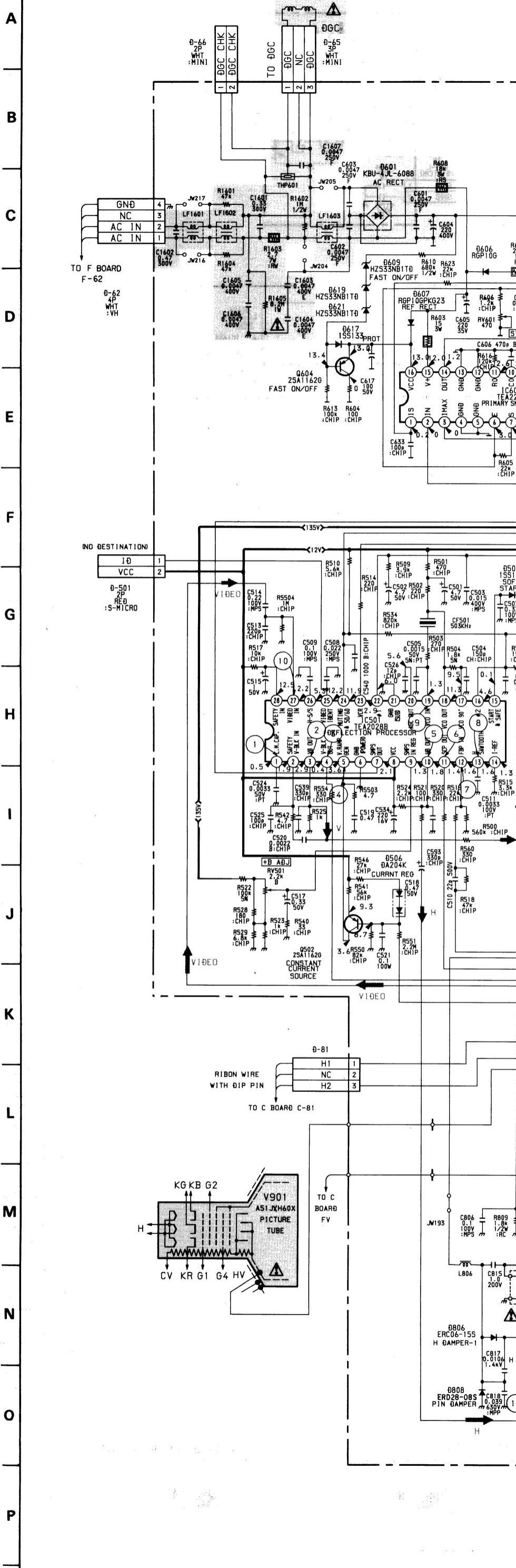
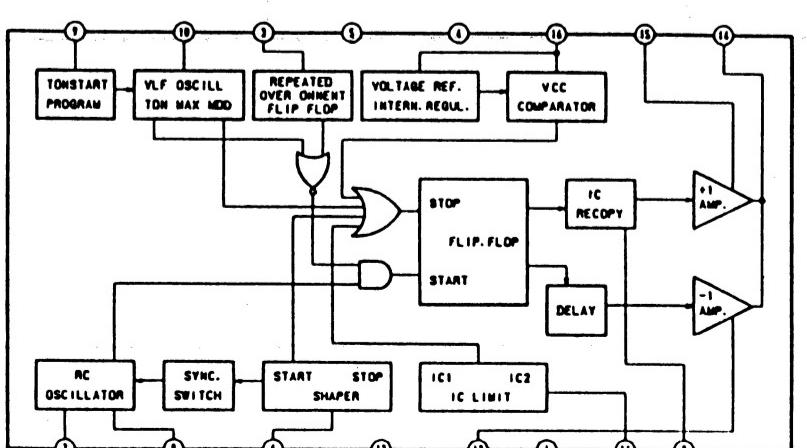
• WAVEFORMS D BOARD

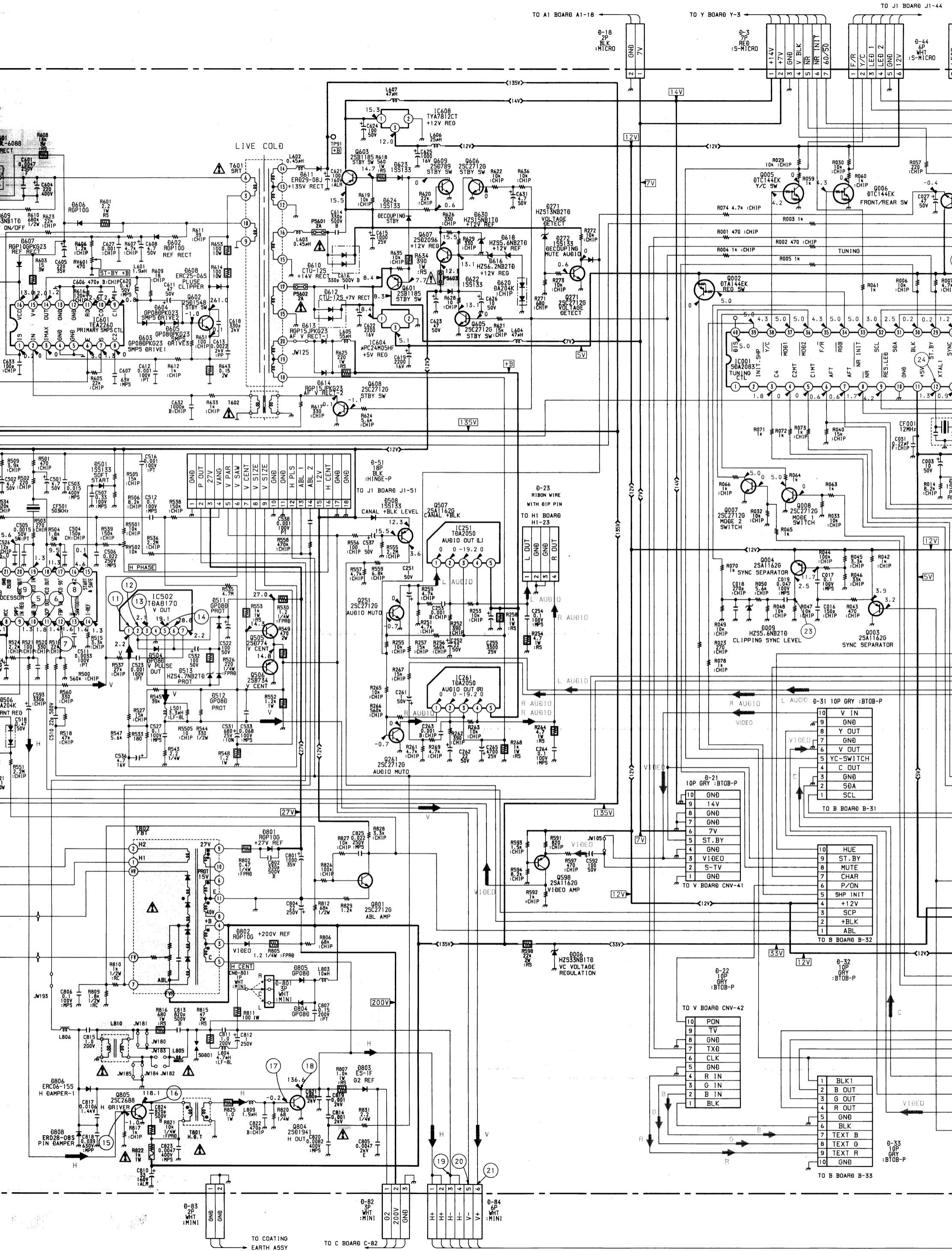


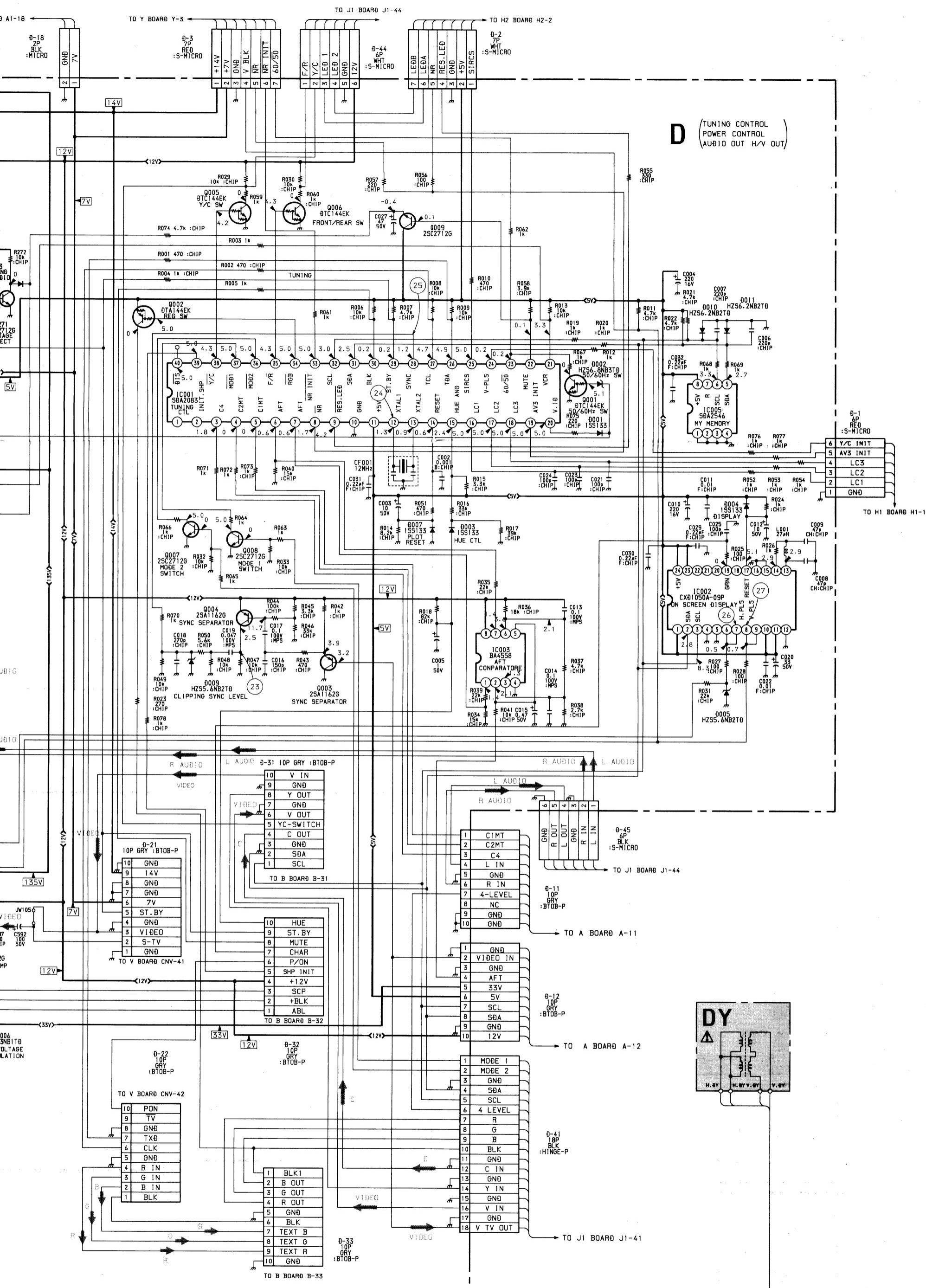
D BOARD IC501 TEA2028B



D BOARD IC601 TEA2260





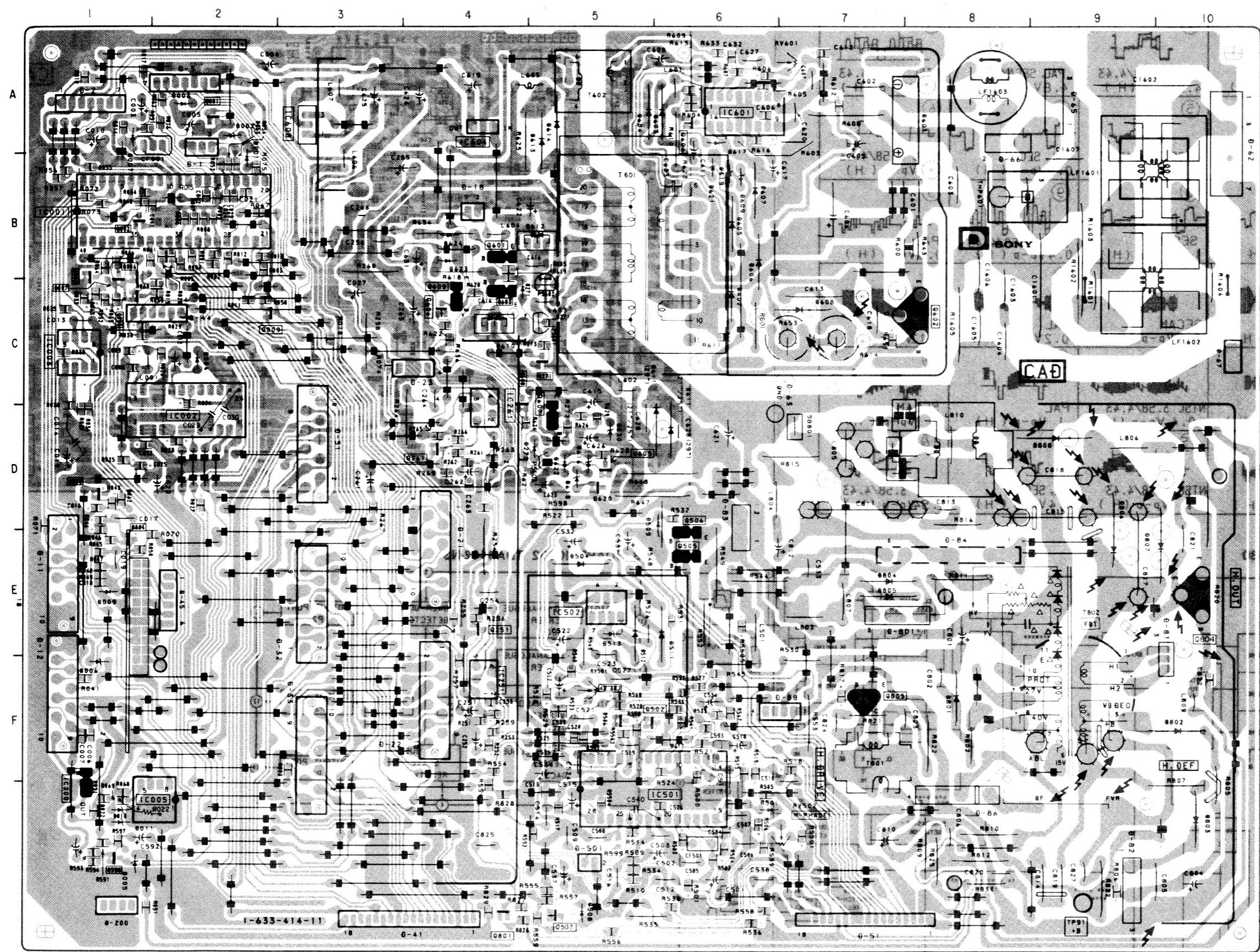


[TUNING CONTROL,
POWER CONTROL,
AUDIO OUT, H/V OUT]

D

D

-D Board-



IC	
D006	F-1
D007	A-1
D009	E-1
D010	G-1
D011	G-1
IC003	C-1
IC005	G-2
IC251	F-4
D271	C-4
D272	D-5
IC261	C-4
D501	G-6
IC501	G-6
D504	E-5
IC502	E-5
D506	F-5
IC601	A-6
D508	G-5
IC604	A-4
D509	D-6
D511	E-6
D512	E-5
D513	E-5
D601	A-8
D602	C-6
D603	A-6
D604	A-5
D605	B-6
D606	B-6
Q005	C-1
Q006	B-1
Q007	C-1
Q008	C-1
Q009	C-2
Q251	E-4
Q261	D-4
Q271	C-5
Q502	F-6
Q505	E-6
Q506	E-6
Q507	G-5
Q598	G-1
Q601	B-4
Q602	C-8
Q603	C-4
Q604	A-6
Q605	D-5
Q606	C-4
Q607	D-5
Q608	F-8
Q609	F-10
Q801	C-4
Q804	E-7
Q805	E-7
Q806	E-9
Q807	E-10
Q808	D-9

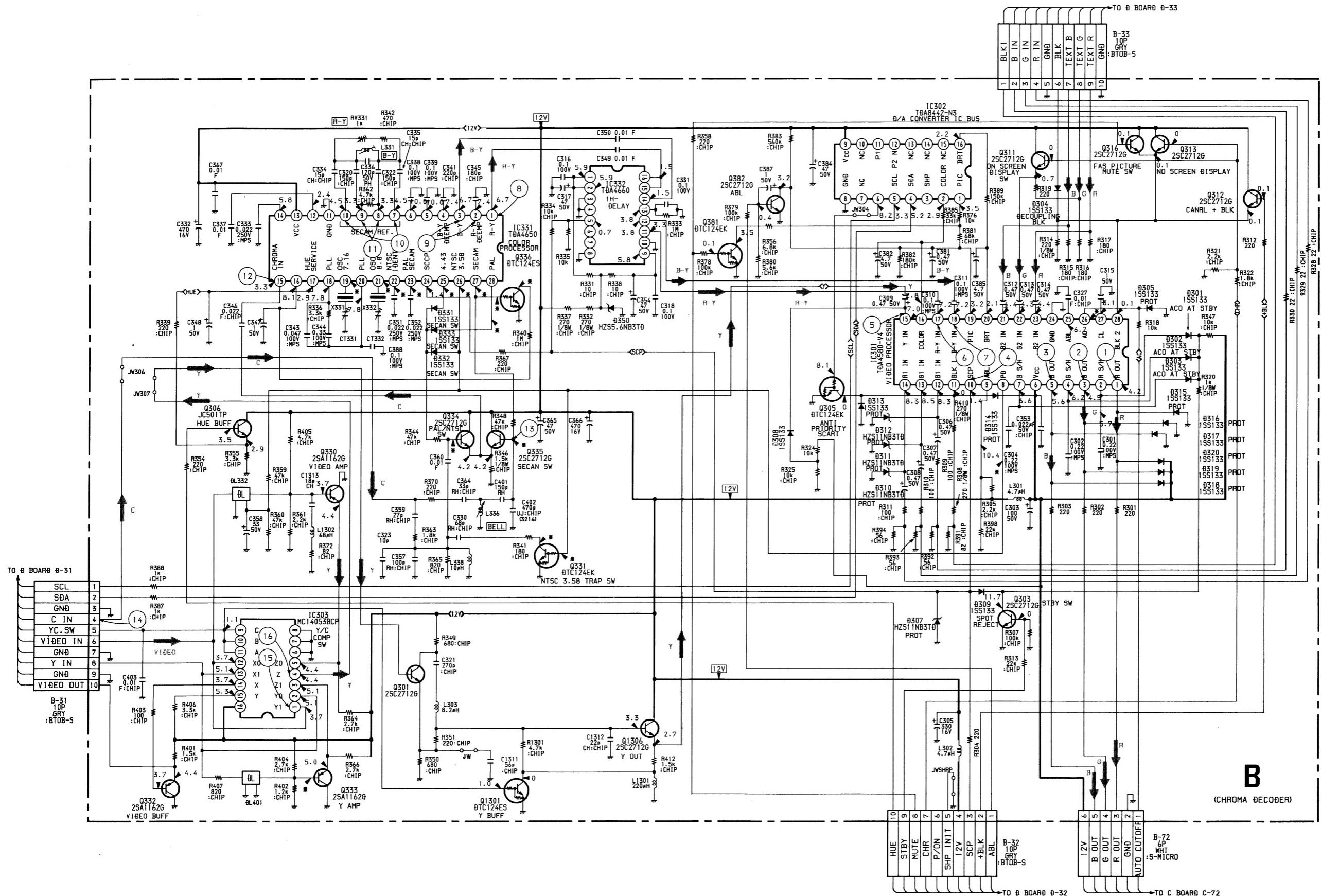
TRANSISTOR	
Q001	A-2
Q002	B-1
Q003	D-1
Q004	D-1
Q005	C-1
Q006	B-1
Q007	C-1
Q008	C-1
Q009	C-2
Q251	E-4
Q261	D-4
Q271	C-5
Q502	F-6
Q505	E-6
Q506	E-6
Q507	G-5
Q598	G-1
Q601	B-4
Q602	B-6
Q603	D-5
Q604	C-4
Q605	B-4
Q606	D-5
Q607	F-8
Q608	F-10
Q609	C-4
Q801	G-4
Q804	E-7
Q805	E-7
Q806	E-9
Q807	E-10
Q808	D-9

DIODE	
D001	B-2
D002	A-2
D003	A-2
D004	C-2
D005	G-1

VARIABLE RESISTOR	
RV501	F-5
RV502	G-7
RV601	A-7

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

A



15

16

17

18

19

20

21

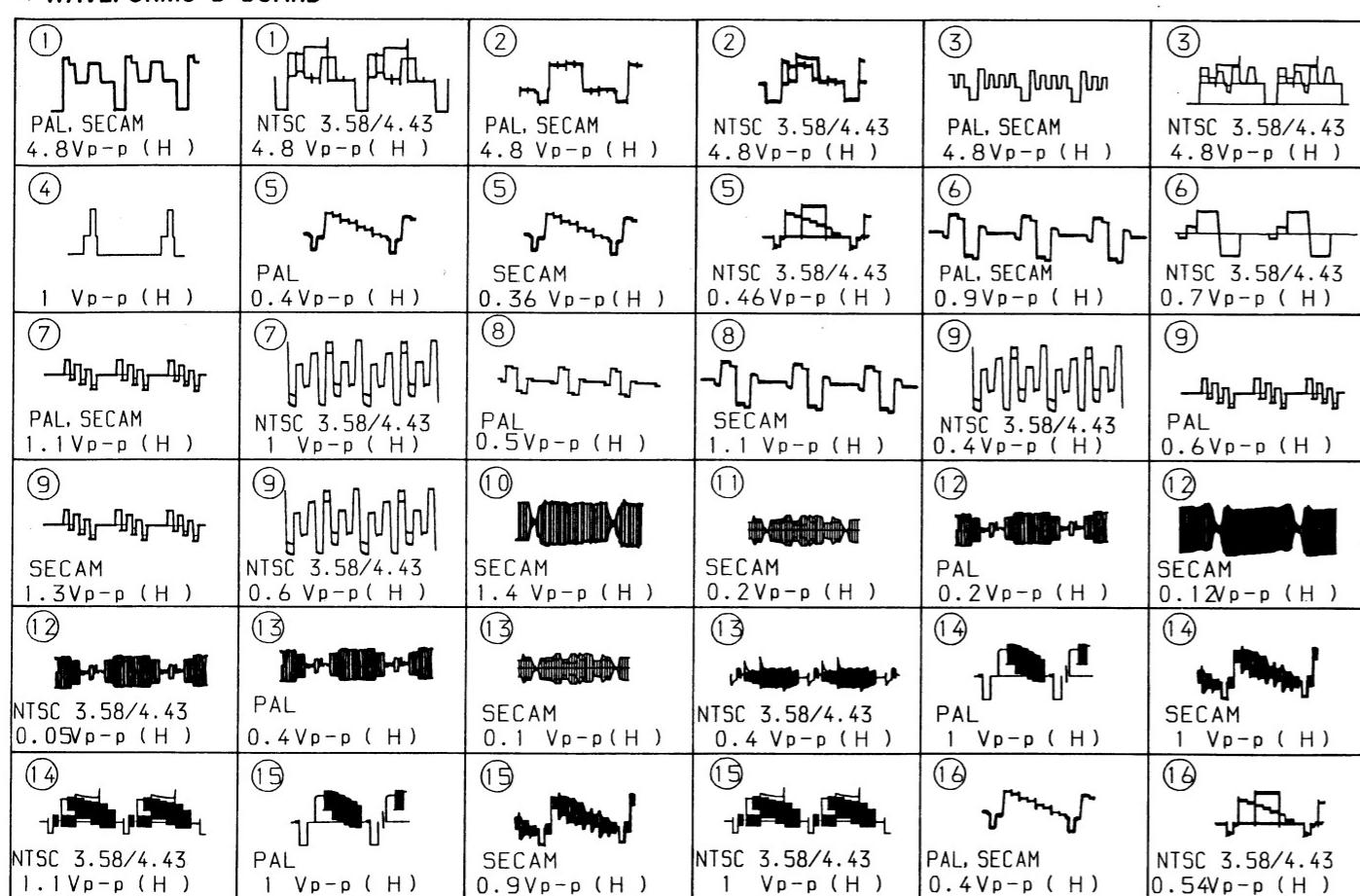
22

23

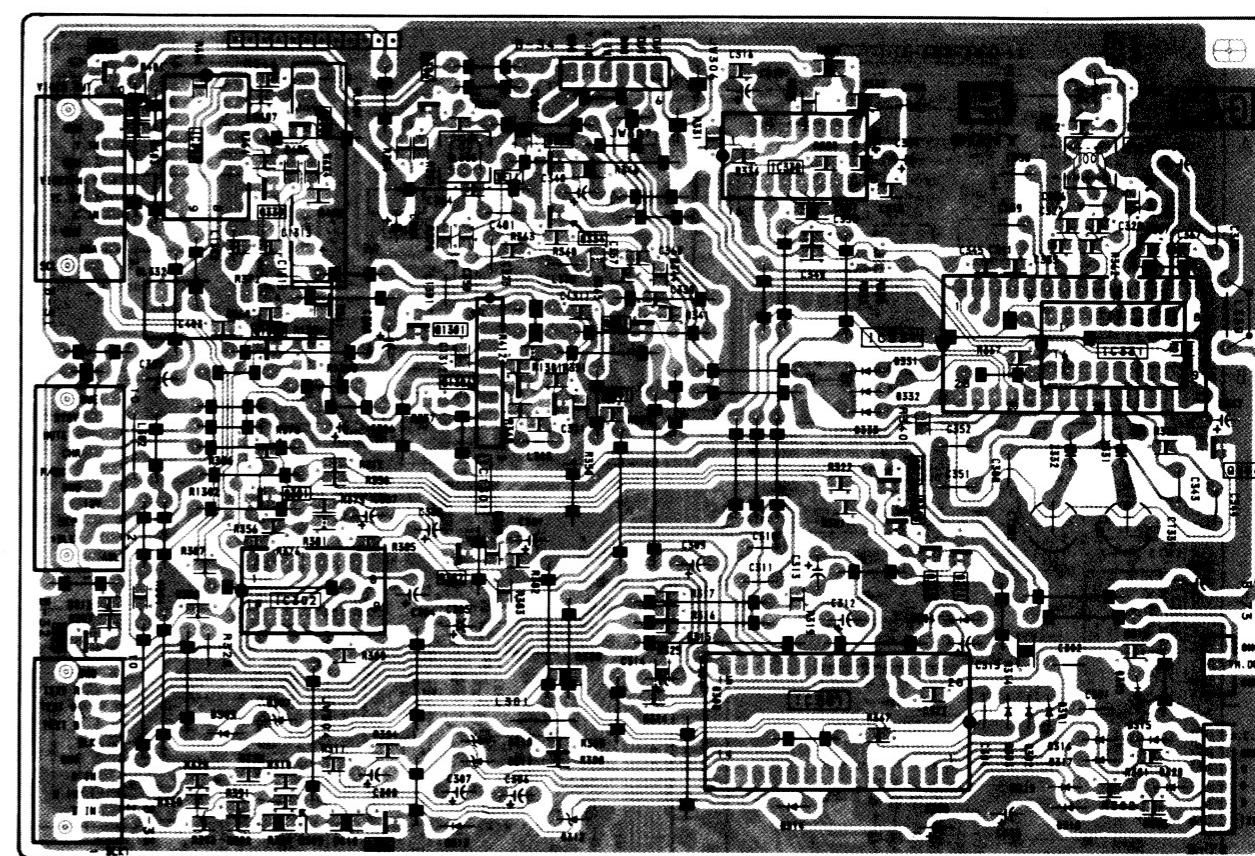
B

[CHROMA DECODER]

• WAVEFORMS B BOARD

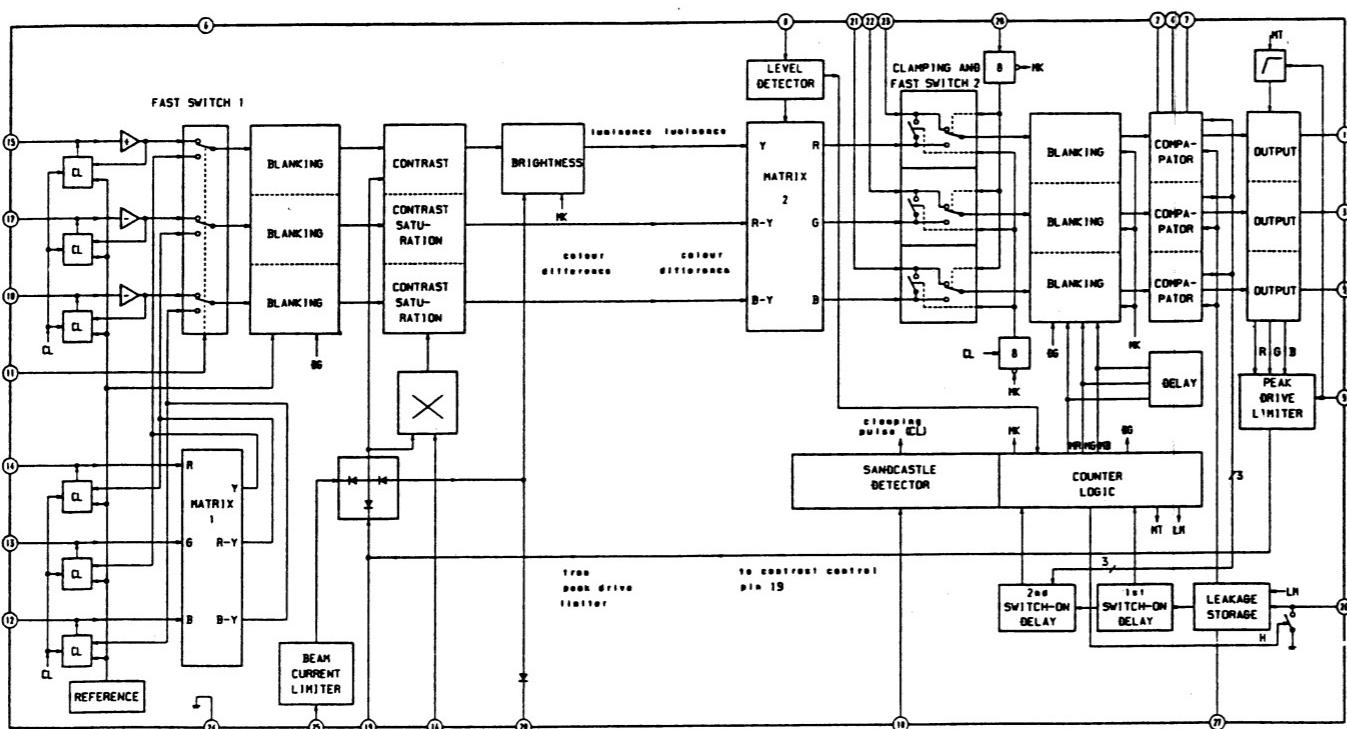


—B Board—

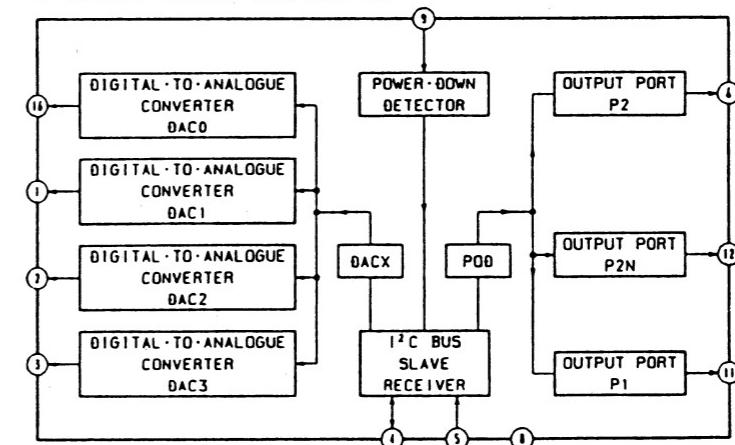


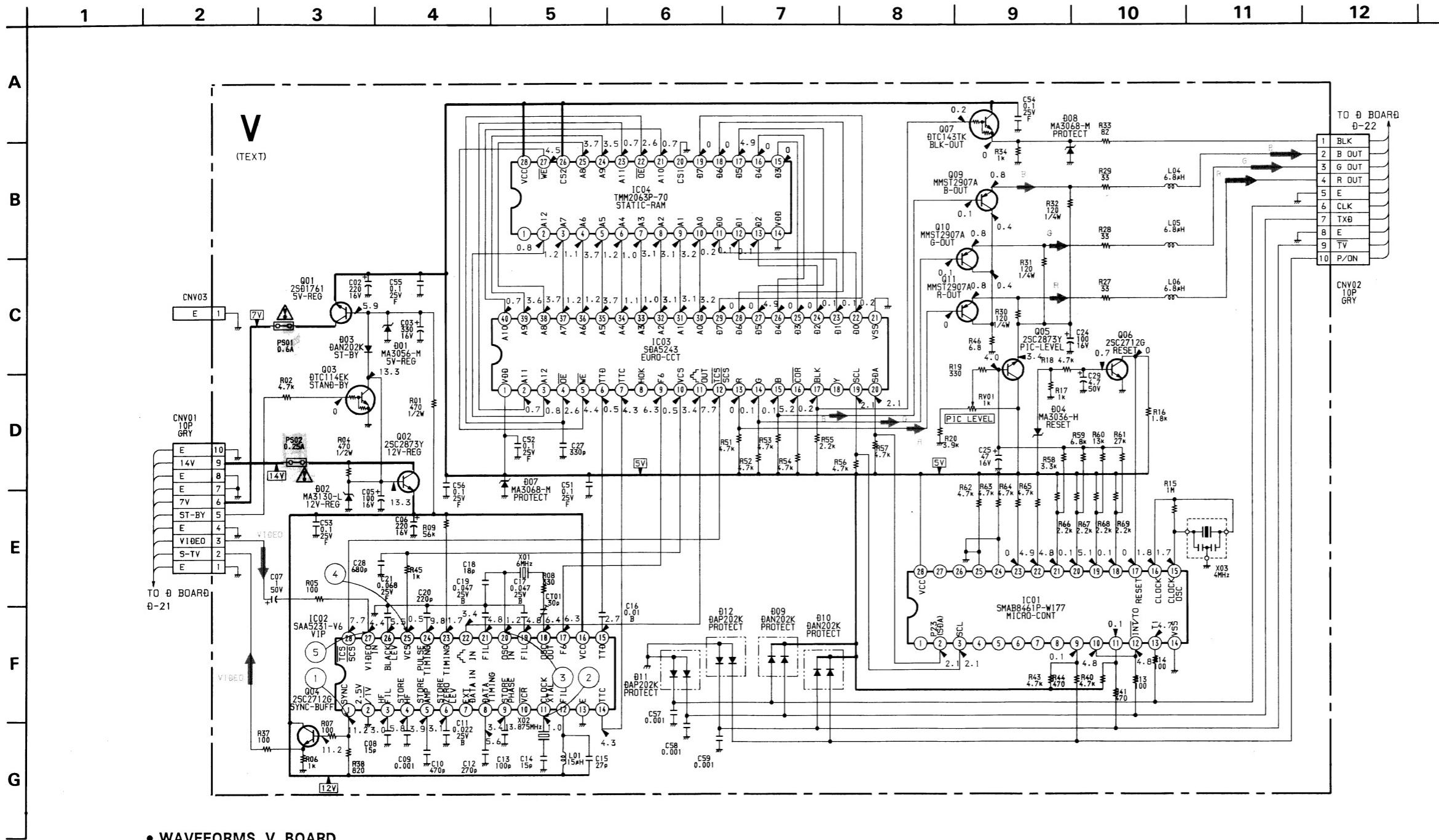
B BOARD IC301 TDA4580

	PAL	SECAM	NTSC3.58	NTSC4.43
01 (A)	0.1	0.1	5.8	0.1
26 (B)	6.7	6.8	5.1	5.1
31 (C)	3.1	3.6	3.1	2.8
21 (D)	3.0	3.5	2.9	2.7
22 (E)	5.6	5.6	7.1	7.2
23 (F)	7.5	7.0	5.6	5.6
25 (G)	0.1	0.1	0.1	5.8
26 (H)	0.1	0.1	5.8	0.1
27 (I)	0.1	5.8	0.1	0.1
28 (J)	5.9	0.1	0.1	0.1
31 (K)	0.1	0.1	5.8	0.1
(C)	1.5	1.9	0	0.8
33 (L)	3.4	4.4	4.4	4.4
34 (M)	4.9	0.1	4.8	4.8
35 (N)	0.1	4.8	0.1	0.1
36 (O)	0.1	5.8	0.1	0.1
(C)	7.3	0	7.3	7.3

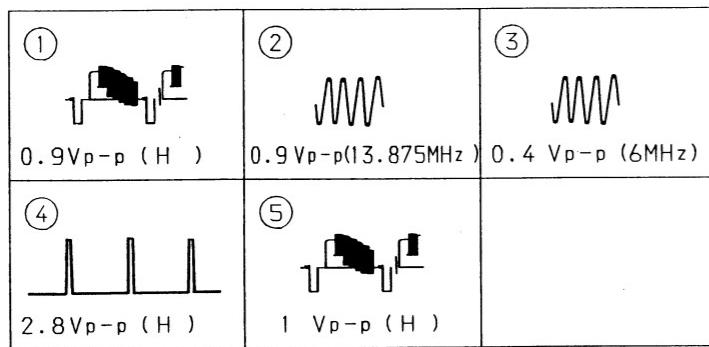


B BOARD IC302 TDA8442-N3





• WAVEFORMS V BOARD

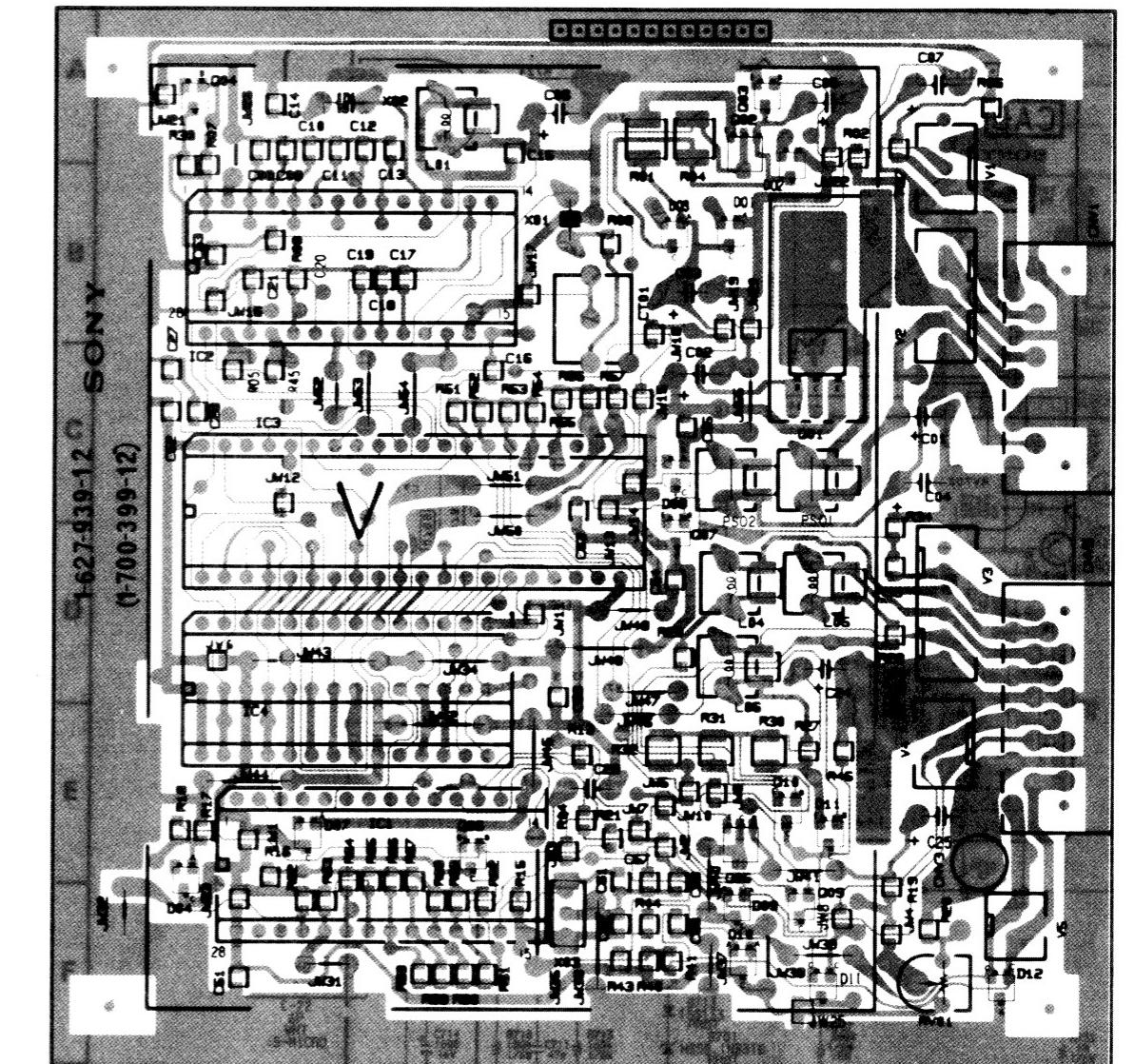
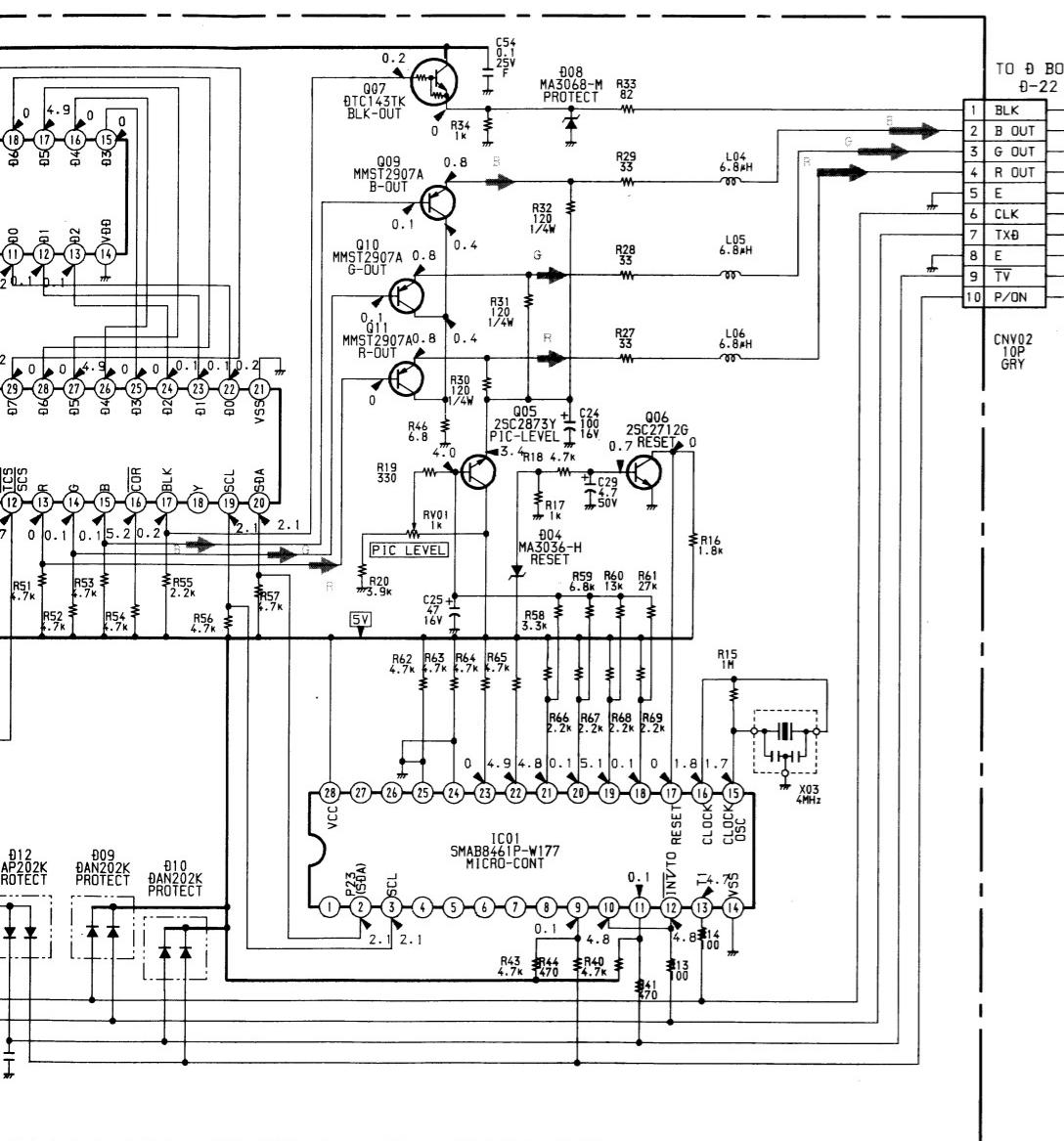


7 | 8 | 9 | 10 | 11 | 12 |

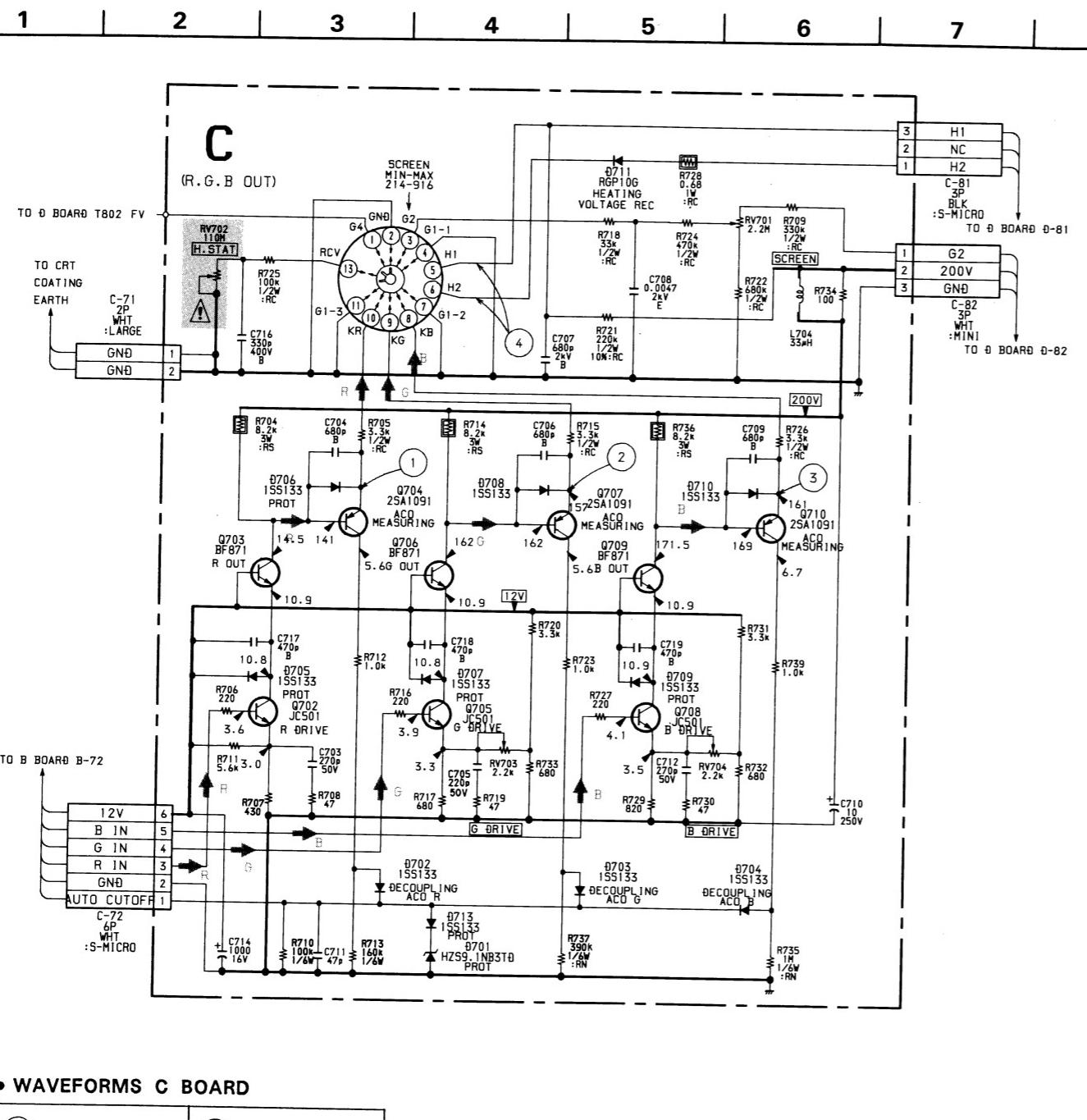
[TEXT]

V

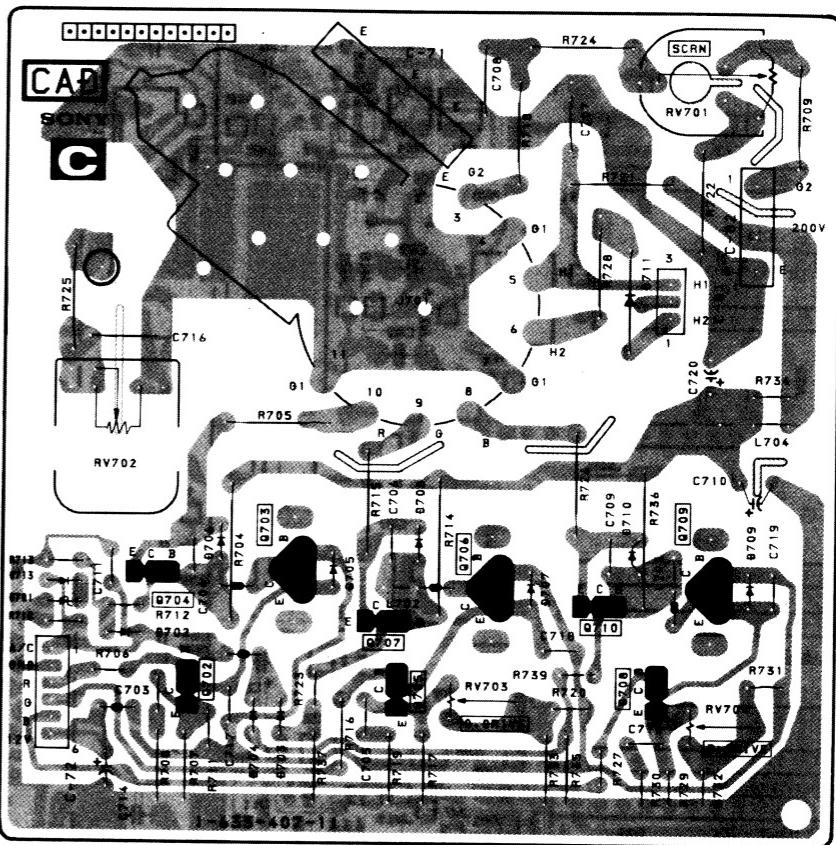
—V Board—



C [R · G · B OUT]

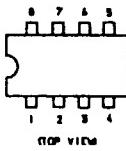


—C Board—

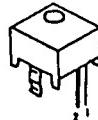


5-4. SEMICONDUCTORS

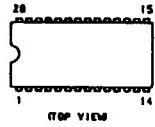
BA4558
SDA2546
TBA129
TEA2014
TEA2031A
 μ PC4558C



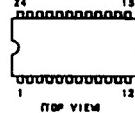
BX1387



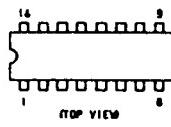
CXA1114P
SAA5231-V6
SMAB8461P-W177
TC5563APL
TDA4580
TDA4650
TDA6200
TEA2028B
TMM2063P-70



CXD1050A
TD6710AN



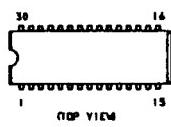
MC14053BCP
PCF8574
TC4049BP
TC4053BP
TDA4510/V6
TDA4660
TDA8442-N3
TEA2260



SDA2083
SDA5243



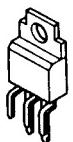
TA8662N



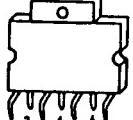
TC6011N



TDA2050



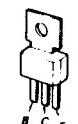
TDA8170



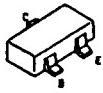
TYA7812CT



BF871



DTA144EK
DTC114EK
DTC124EK
DTC143TK
DTC144EK
MMST2907A
2SA1162G
2SC2712



DTA144ES
DTC124ES
DTC144ES
2SA1162



JA101
JC501
2SA1091
2SD789



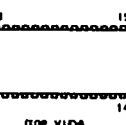
2SB734
2SD773
2SD774



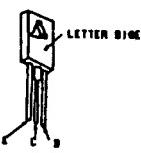
2SB1185
2SD1761



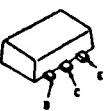
2SC2216



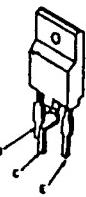
2SC2688



2SC2873Y



2SD1548-LB
2SD1941



2SD2096



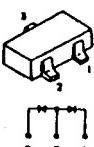
CTU-12S



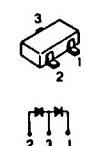
DAN202K



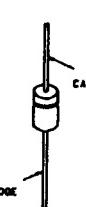
DAP202K



DA204K



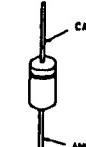
ERC06-15S
ERC25-06S



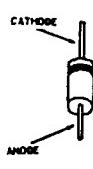
ERD28-08S



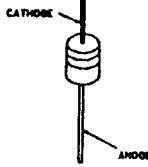
ES1F
GP08D
RGP10G
RGP15J



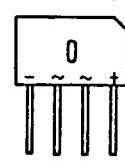
ERD29-08J



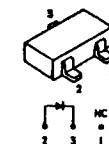
HZS10NB3TD
HZS11NB3TD
HZS13NB2TD
HZS15NB1TD
HZS33NB1TD
HZS36NB4TD
HZS4.7NB2TD
HZS5.6NB2TD
HZS5.6NB3TD
HZS6.2NB2TD
HZS6.8NB3TD
HZS7.5NB3TD
HZS9.1NB3TD
RD5.6ES-B2
1SS133



KBU4JL-6088



MA3036H
MA3056M
MA3068M
MA3130L



MC911



MC921



SECTION 6

EXPLODED VIEWS

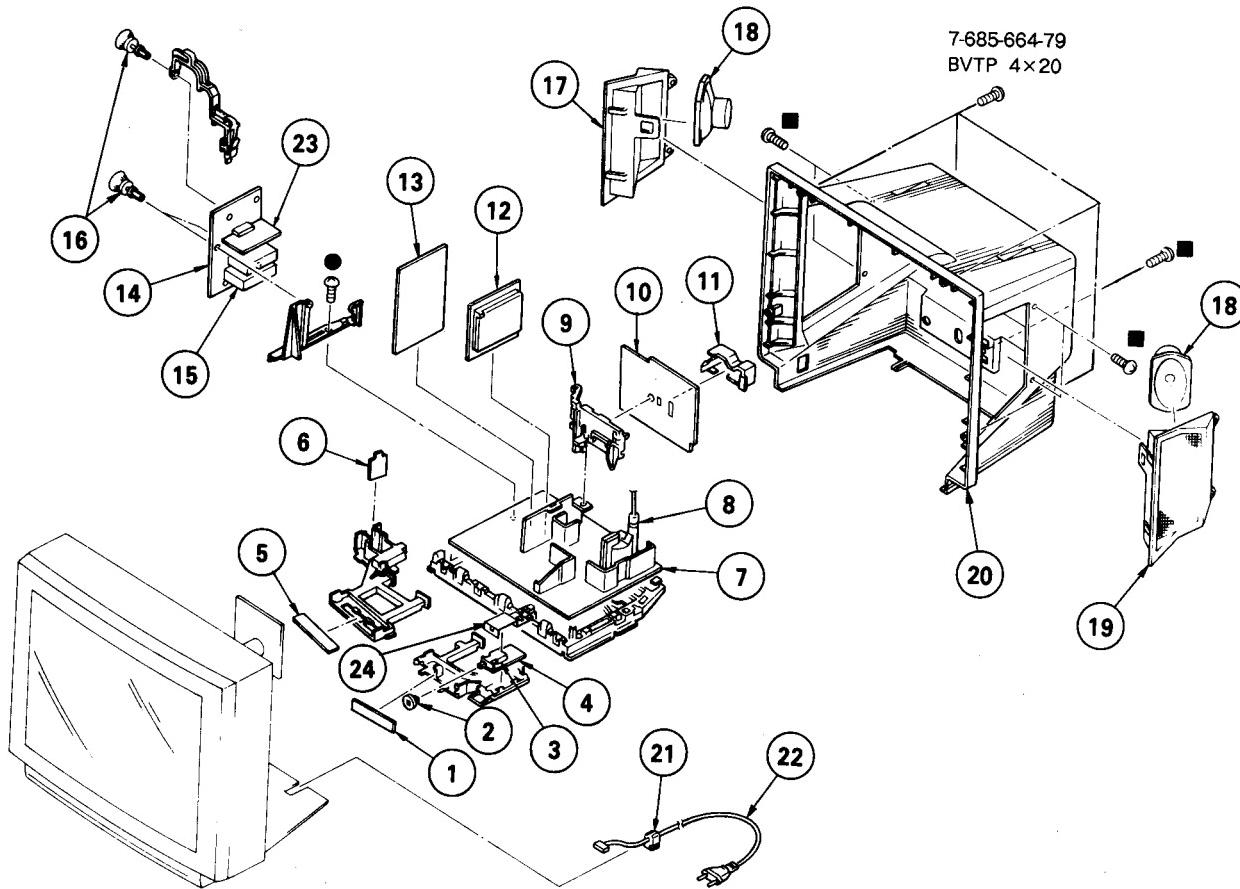
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
 - The construction parts of an assembled part are indicated with a collation number in the remark column.
 - Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  are critical for safety.
Replace only with part number specified.

6-1. CHASSIS

- : BVTP 3×12 7-685-648-79
■ : BVTP 4×16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*1-633-410-11	H2 BOARD		13	*A-1621-010-A	B BOARD, COMPLETE	
2	4-386-611-01	COVER, SWITCH		14	*A-1632-005-A	A BOARD, COMPLETE	
3	Δ 1-571-433-11	SWITCH, PUSH (AC POWER)		15	Δ 1-465-301-11	TUNER, BT (UV-816(PLL))	
4	*1-633-408-11	F BOARD		16	4-386-618-01	RIVET, T TYPE	
5	*1-633-409-11	H1 BOARD		17	X-4200-025-1	BAFFLE (L) ASSY, BOARD	
6	*1-633-411-11	J2 BOARD		18		SPEAKER	
7	*A-1642-010-A	D BOARD, COMPLETE		19	X-4200-026-1	BAFFLE (R) ASSY, BOARD	
8	Δ 1-439-416-11	TRANSFORMER ASSY, PFLYBACK (UX-1600)		20	4-200-158-01	COVER, REAR	
9	*4-386-624-11	BRACKET, J		21	Δ 4-389-201-02	HOLDER, AC CORD	
10	*A-1651-014-A	J1 BOARD, COMPLETE		22	Δ 1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
11	4-200-014-01	BRACKET, TERMINAL		23	*A-1654-003-A	IFG BOARD, COMPLETE	
12	*A-1347-031-A	V BOARD, COMPLETE		24	4-200-274-01	COVER, POWER SWITCH	

SECTION 7
ELECTRICAL PARTS LIST

V

NOTE:

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

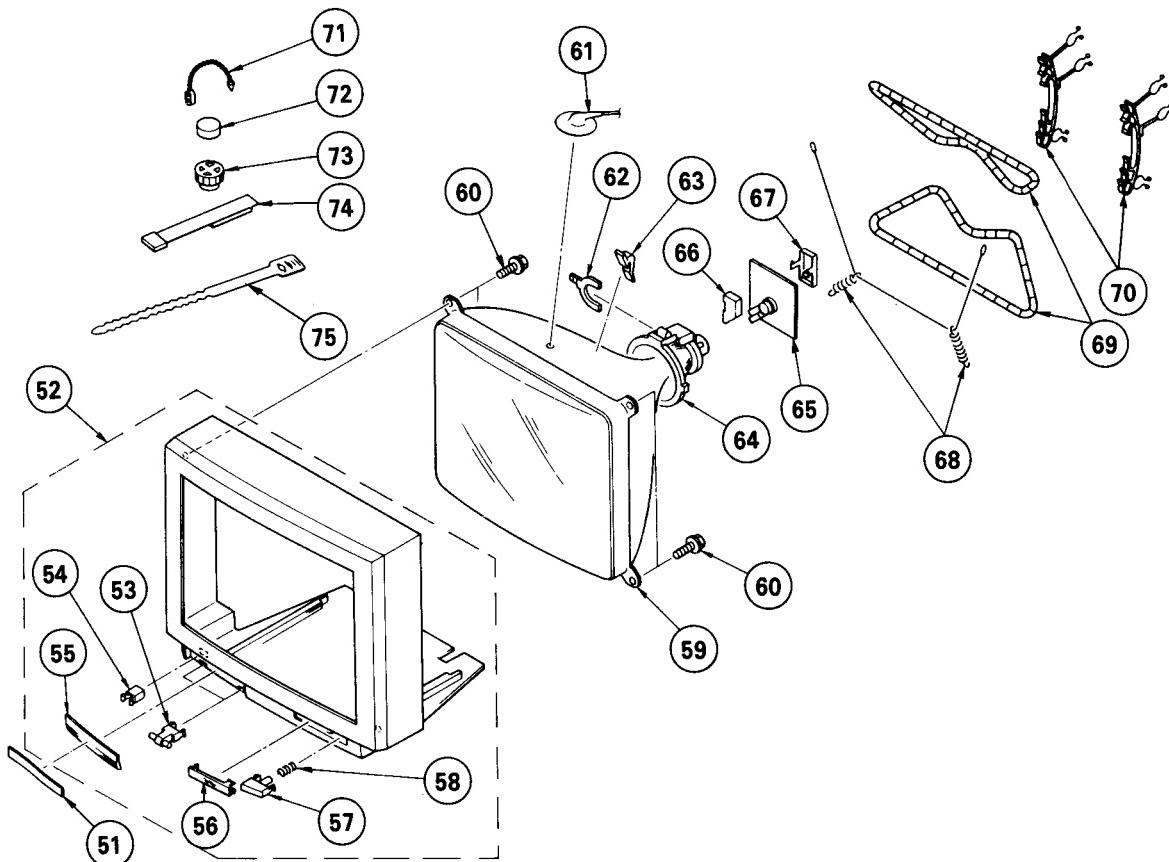
CAPACITORS COILS
• MF : μ F, PF : $\mu\mu$ F • MMH : mH, UH : μ H

RESISTORS

- All resistors are in ohms
- F : nonflammable

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
*A-1347-031-A V BOARD, COMPLETE *****								
*4-380-699-01 CASE (UPPER LID), SHIELD, A1								
<CAPACITOR>								
C02	1-124-120-11	ELECT	220MF	20%	16V	D01	8-719-105-91 DIODE RD5.6M-B2	
C03	1-124-119-00	ELECT	330MF	20%	16V	D02	8-719-106-79 DIODE RD13M-B1	
C05	1-126-101-11	ELECT	100MF	20%	16V	D03	8-719-400-18 DIODE MA152WK	
C06	1-124-120-11	ELECT	220MF	20%	16V	D04	8-719-105-52 DIODE RD3.6M-B2	
C07	1-124-791-11	ELECT	1MF	20%	50V	D07	8-719-106-17 DIODE RD6.8M-B2	
C08	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	D08	8-719-106-17 DIODE RD6.8M-B2	
C09	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	D09	8-719-400-18 DIODE MA152WK	
C10	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	D10	8-719-400-18 DIODE MA152WK	
C11	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	D11	8-719-914-44 DIODE DAP202K	
C12	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	D12	8-719-914-44 DIODE DAP202K	
C13	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	IC1	8-759-986-92 IC MAB-846IP-W177	
C14	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	IC2	8-759-972-96 IC SAA5231-V6	
C15	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	IC3	8-759-032-98 IC SDA5243	
C16	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	IC4	8-759-230-68 IC TMM2063P-70	
C17	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	<IC>		
C18	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	L01	1-408-411-00 INDUCTOR 15UH	
C19	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	L04	1-408-407-00 INDUCTOR 6.8UH	
C20	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	L05	1-408-407-00 INDUCTOR 6.8UH	
C21	1-163-833-00	CERAMIC CHIP	0.068MF		25V	L06	1-408-407-00 INDUCTOR 6.8UH	
C24	1-126-101-11	ELECT	100MF	20%	16V	<COIL>		
C25	1-124-477-11	ELECT	47MF	20%	16V	PS01	Δ 1-532-679-91 LINK, IC (ICP-N15) 0.6A	
C27	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	PS02	Δ 1-532-727-91 LINK, IC 0.25A	
C28	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	<IC LINK>		
C29	1-124-927-11	ELECT	4.7MF	20%	50V	<TRANSISTOR>		
C51	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q3	8-729-900-53 TRANSISTOR DTC114EK	
C52	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q01	8-729-107-26 TRANSISTOR 2SD1585-K	
C53	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q02	8-729-807-50 TRANSISTOR 2SD1623-R	
C54	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q04	8-729-271-22 TRANSISTOR 2SC2712-G	
C55	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q05	8-729-807-50 TRANSISTOR 2SD1623-R	
C56	1-163-038-00	CERAMIC CHIP	0.1MF		25V	Q06	8-729-271-22 TRANSISTOR 2SC2712-G	
C57	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q07	8-729-900-98 TRANSISTOR DTC143TK	
C58	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q09	8-729-807-87 TRANSISTOR 2SB1295-UL6	
C59	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q10	8-729-807-87 TRANSISTOR 2SB1295-UL6	
<CONNECTOR>								
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD						
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD						
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P						
<RESISTOR>								
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)	JW1	1-216-295-00	METAL GLAZE	0	5%	1/1W
			JW2	1-216-295-00	METAL GLAZE	0	5%	1/1W
			JW3	1-216-295-00	METAL GLAZE	0	5%	1/1W
			JW4	1-216-295-00	METAL GLAZE	0	5%	1/1W
			JW5	1-216-295-00	METAL GLAZE	0	5%	1/1W
			JW6	1-216-295-00	METAL GLAZE	0	5%	1/1W

6-2. PICTURE TUBE



The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-200-162-01	COVER, DOOR		64	Δ 1-451-295-11	DEFLECTION YOKE (Y21PFA2)	
52	X-4200-027-1	CABINET ASSY (WITH BEZEL ASSY)	53-58	65	*A-1638-003-A	C BOARD, COMPLETE	
53	3-703-035-11	SHAFT, LID		66	*4-379-167-01	COVER (MAIN), CV	
54	4-386-710-01	CATCHER, PUSH		67	*4-379-160-01	COVER (REAR LID), CV	
55	4-200-159-01	DOOR		68	4-303-774-99	SPRING	
56	4-200-148-01	WINDOW, ORNAMENTAL		69	Δ 1-426-383-11	COIL, DEMAGNETIZATION	
57	4-200-150-01	BUTTON, POWER		70	*4-386-622-01	BAND, DGC	
58	4-329-112-21	SPRING		71	4-308-870-00	CLIP, LEAD WIRE	
59	Δ 8-738-753-05	PICTURE TUBE (A51JXH60X)		72	1-452-032-00	MAGNET, DISK; 10MM ϕ	
60	4-382-733-01	SCREW (S), PT		73	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
62	1-452-277-00	MAGNET, BMC		74	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
63	3-703-961-01	SPACER, DY		75	3-701-007-00	BAND, BINDING	

V B

REF. NO.	PART NO.	DESCRIPTION			REMARK	REF. NO.	PART NO.	DESCRIPTION			REMARK
JW7	1-216-295-00	METAL GLAZE	0	5%	1/10W	R64	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
JW8	1-216-295-00	METAL GLAZE	0	5%	1/10W	R65	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
JW9	1-216-295-00	METAL GLAZE	0	5%	1/10W	R66	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
JW10	1-216-295-00	METAL GLAZE	0	5%	1/10W	R67	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
JW11	1-216-295-00	METAL GLAZE	0	5%	1/10W	R68	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
JW12	1-216-295-00	METAL GLAZE	0	5%	1/10W	R69	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
JW13	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW14	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW15	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW16	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW17	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW18	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW19	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW20	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW21	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW22	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW23	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW24	1-216-295-00	METAL GLAZE	0	5%	1/10W						
JW25	1-216-295-00	METAL GLAZE	0	5%	1/10W						
ROI	1-218-326-11	METAL GLAZE	470	5%	1/2W						
R02	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R04	1-218-326-11	METAL GLAZE	470	5%	1/2W						
R05	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R06	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R07	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R08	1-216-037-00	METAL GLAZE	330	5%	1/10W						
R09	1-216-091-00	METAL GLAZE	56K	5%	1/10W						
R13	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R14	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R15	1-216-121-00	METAL GLAZE	1M	5%	1/10W						
R16	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W						
R17	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R18	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R19	1-216-037-00	METAL GLAZE	330	5%	1/10W						
R20	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W						
R27	1-216-013-00	METAL GLAZE	33	5%	1/10W						
R28	1-216-013-00	METAL GLAZE	33	5%	1/10W						
R29	1-216-013-00	METAL GLAZE	33	5%	1/10W						
R30	1-218-325-11	METAL GLAZE	120	5%	1/4W						
R31	1-218-325-11	METAL GLAZE	120	5%	1/4W						
R32	1-218-325-11	METAL GLAZE	120	5%	1/4W						
R33	1-216-023-00	METAL GLAZE	82	5%	1/10W						
R34	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R37	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R38	1-216-047-00	METAL GLAZE	820	5%	1/10W						
R40	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R41	1-216-041-00	METAL GLAZE	470	5%	1/10W						
R43	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R44	1-216-041-00	METAL GLAZE	470	5%	1/10W						
R45	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R46	1-216-311-00	METAL GLAZE	6.8	5%	1/10W						
R51	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R53	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R54	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R55	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W						
R56	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R57	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R58	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W						
R59	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W						
R60	1-216-076-00	METAL GLAZE	13K	5%	1/10W						
R61	1-216-083-00	METAL GLAZE	27K	5%	1/10W						
R62	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
R63	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W						
						C301	1-106-228-00	MYLAR	0.22MF	10%	100V
						C302	1-106-228-00	MYLAR	0.22MF	10%	100V
						C303	1-124-122-11	ELECT	100MF	20%	50V
						C304	1-106-228-00	MYLAR	0.22MF	10%	100V
						C305	1-124-119-00	ELECT	330MF	20%	16V
						C306	1-124-902-00	ELECT	0.47MF	20%	50V
						C307	1-124-902-00	ELECT	0.47MF	20%	50V
						C308	1-124-902-00	ELECT	0.47MF	20%	50V
						C309	1-124-902-00	ELECT	0.47MF	20%	50V
						C310	1-106-220-00	MYLAR	0.1MF	10%	100V
						C311	1-106-220-00	MYLAR	0.1MF	10%	100V
						C312	1-124-902-00	ELECT	0.47MF	20%	50V
						C313	1-124-902-00	ELECT	0.47MF	20%	50V
						C314	1-124-902-00	ELECT	0.47MF	20%	50V
						C315	1-124-791-11	ELECT	1MF	20%	50V
						C316	1-106-220-00	MYLAR	0.1MF	10%	100V
						C317	1-124-910-11	ELECT	47MF	20%	50V
						C318	1-106-220-00	MYLAR	0.1MF	10%	100V
						C320	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
						C321	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
						C322	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
						C323	1-102-947-00	CERAMIC CHIP	10PF	0.5PF	50V
						C327	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
						C330	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
						C331	1-106-220-00	MYLAR	0.1MF	10%	100V
						C332	1-126-103-11	ELECT	470MF	20%	16V
						C333	1-106-375-12	MYLAR	0.022MF	10%	250V
						C334	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
						C335	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
						C336	1-102-816-00	CERAMIC	120PF	5%	50V
						C337	1-101-004-00	CERAMIC	0.01MF	50V	
						C338	1-106-220-00	MYLAR	0.1MF	10%	100V
						C339	1-106-220-00	MYLAR	0.1MF	10%	100V
						C341	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
						C343	1-106-383-00	MYLAR	0.047MF	10%	100V
						C344	1-130-783-00	MYLAR	0.33MF	10%	100V
						C345	1-163-123-00	CERAMIC CHIP	180PF	5%	50V

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C346	1-163-033-00	CERAMIC CHIP 0.022MF			50V	<IC>	
C347	1-124-791-11	ELECT 1MF	20%		50V	IC301 8-759-979-85	IC TDA4580-V4
C348	1-124-791-11	ELECT 1MF	20%		50V	IC302 8-759-980-60	IC TDA8442N3
C349	1-101-004-00	CERAMIC 0.01MF			50V	IC303 8-759-040-53	IC MC14053BCP
C350	1-101-004-00	CERAMIC 0.01MF			50V	IC331 8-759-990-29	IC TDA4650
C351	1-106-375-12	MYLAR 0.022MF	10%		250V	IC332 8-759-990-30	IC TDA4660
C352	1-106-375-12	MYLAR 0.022MF	10%		250V		
C353	1-163-063-00	CERAMIC CHIP 0.022MF	10%		50V		
C354	1-124-910-11	ELECT 47MF	20%		50V		
C357	1-163-117-00	CERAMIC CHIP 100PF	5%		50V		
C358	1-124-917-11	ELECT 33MF	20%		50V	L301 1-410-868-11	INDUCTOR 4.7UH
C359	1-163-103-00	CERAMIC CHIP 27PF	5%		50V	L302 1-410-868-11	INDUCTOR 4.7UH
C360	1-101-004-00	CERAMIC 0.01MF			50V	L303 1-408-408-00	INDUCTOR 8.2UH
C364	1-163-105-00	CERAMIC CHIP 33PF	5%		50V	L331 1-404-554-11	COIL
C365	1-124-910-11	ELECT 47MF	20%		50V	L336 1-404-554-11	COIL
C366	1-126-103-11	ELECT 470MF	20%		16V	L338 1-408-409-00	INDUCTOR 10UH
C367	1-101-004-00	CERAMIC 0.01MF			50V	L1301 1-408-425-00	INDUCTOR 220UH
C381	1-124-902-00	ELECT 0.47MF	20%		50V	L1302 1-408-419-00	INDUCTOR 68UH
C382	1-124-927-11	ELECT 4.7MF	20%		50V		
C384	1-124-910-11	ELECT 47MF	20%		50V		
C385	1-124-927-11	ELECT 4.7MF	20%		50V		
C386	1-124-927-11	ELECT 4.7MF	20%		50V		
C387	1-130-833-00	MYLAR 0.82MF	10%		63V		
C388	1-106-220-00	MYLAR 0.1MF	10%		100V		
C401	1-101-361-00	CERAMIC 150PF	5%		50V		
C402	1-163-197-00	CERAMIC CHIP 470PF	5%		50V		
C403	1-164-232-11	CERAMIC CHIP 0.01MF			50V		
C1311	1-163-111-00	CERAMIC CHIP 56PF	5%		50V		
C1312	1-163-101-00	CERAMIC CHIP 22PF	5%		50V		
C1313	1-102-953-00	CERAMIC 18PF	5%		50V		
<TRIMMER>							
CT331	1-141-418-11	CAP, ADJ					
CT332	1-141-418-11	CAP, ADJ					
<DIODE>							
D301	8-719-911-19	DIODE ISS119					
D302	8-719-911-19	DIODE ISS119					
D303	8-719-911-19	DIODE ISS119					
D304	8-719-911-19	DIODE ISS119					
D305	8-719-911-19	DIODE ISS119					
D307	8-719-929-24	DIODE HZS11NB3					
D308	8-719-911-19	DIODE ISS119					
D309	8-719-911-19	DIODE ISS119					
D310	8-719-929-24	DIODE HZS11NB3					
D311	8-719-929-24	DIODE HZS11NB3					
D312	8-719-929-24	DIODE HZS11NB3					
D313	8-719-911-19	DIODE ISS119					
D314	8-719-911-19	DIODE ISS119					
D315	8-719-911-19	DIODE ISS119					
D316	8-719-911-19	DIODE ISS119					
D317	8-719-911-19	DIODE ISS119					
D318	8-719-911-19	DIODE ISS119					
D319	8-719-911-19	DIODE ISS119					
D320	8-719-911-19	DIODE ISS119					
D331	8-719-911-19	DIODE ISS119					
D332	8-719-911-19	DIODE ISS119					
D333	8-719-911-19	DIODE ISS119					
D350	8-719-928-94	DIODE HZS5.6NB3					
<RESISTOR>							
JR384	1-216-295-00	METAL GLAZE 0	5%				
JR390	1-216-295-00	METAL GLAZE 0	5%				
R301	1-249-409-11	CARBON 220	5%				
R302	1-249-409-11	CARBON 220	5%				
R303	1-249-409-11	CARBON 220	5%				
R304	1-249-409-11	CARBON 220	5%				
R305	1-216-057-00	METAL GLAZE 2.2K	5%				
R307	1-216-097-00	METAL GLAZE 100K	5%				
R308	1-216-184-00	METAL GLAZE 270	5%				
R309	1-216-025-00	METAL GLAZE 100	5%				
R310	1-216-025-00	METAL GLAZE 100	5%				
R311	1-216-025-00	METAL GLAZE 100	5%				
R312	1-249-409-11	CARBON 220	5%				
R313	1-216-081-00	METAL GLAZE 22K	5%				
R314	1-216-182-00	METAL GLAZE 220	5%				
R315	1-216-027-00	METAL GLAZE 120	5%				
R316	1-216-027-00	METAL GLAZE 120	5%				
R317	1-216-027-00	METAL GLAZE 120	5%				
R318	1-249-429-11	CARBON 10K	5%				
<DELAY LINE>							
DL332	1-236-062-11	MODULE, Y DELAY LINE					
DL401	1-415-613-11	DELAY LINE, Y					

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

B F A

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R319	1-249-409-11	CARBON	220 5% 1/4W	R398	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R320	1-216-198-00	METAL GLAZE	1K 5% 1/8W	R401	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R321	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R402	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R322	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R403	1-216-025-00	METAL GLAZE	100 5% 1/10W
R323	1-249-422-11	CARBON	2.7K 5% 1/4W	R404	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R324	1-249-429-11	CARBON	10K 5% 1/4W	R405	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R325	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R406	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R328	1-216-009-00	METAL GLAZE	22 5% 1/10W	R407	1-216-047-00	METAL GLAZE	820 5% 1/10W
R329	1-216-009-00	METAL GLAZE	22 5% 1/10W	R410	1-216-184-00	METAL GLAZE	270 5% 1/8W
R330	1-216-009-00	METAL GLAZE	22 5% 1/10W	R412	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R331	1-216-001-00	METAL GLAZE	10 5% 1/10W	R1301	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R332	1-216-184-00	METAL GLAZE	270 5% 1/8W	R1305	1-216-001-00	METAL GLAZE	10 5% 1/10W
R333	1-216-121-00	METAL GLAZE	1M 5% 1/10W	<VARIABLE RESISTOR>			
R334	1-216-073-00	METAL GLAZE	10K 5% 1/10W	<CRYSTAL>			
R335	1-247-852-11	CARBON	7.5K 5% 1/4W	<CRYSTAL>			
R336	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	X331	1-567-307-11	OSCILLATOR, CRYSTAL	
R337	1-216-184-00	METAL GLAZE	270 5% 1/8W	X332	1-567-131-00	OSCILLATOR, CRYSTAL	
R338	1-216-001-00	METAL GLAZE	10 5% 1/10W	*****			
R339	1-216-033-00	METAL GLAZE	220 5% 1/10W	*1-633-408-11 F BOARD			
R340	1-216-121-00	METAL GLAZE	1M 5% 1/10W	*****			
R341	1-216-031-00	METAL GLAZE	180 5% 1/10W	*1-566-664-11 PIN, CONNECTOR 4P			
R342	1-216-041-00	METAL GLAZE	470 5% 1/10W	*****			
R344	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R351 1-216-033-00 METAL GLAZE 220 5% 1/10W <FUSE>			
R346	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W	F1601 Δ 1-532-350-11 FUSE, TIME-LAG 4A/250V			
R347	1-216-073-00	METAL GLAZE	10K 5% 1/10W	1-533-230-11 HOLDER, FUSE; F1601			
R348	1-216-089-00	METAL GLAZE	47K 5% 1/10W	*****			
R349	1-216-045-00	METAL GLAZE	680 5% 1/10W	R355 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W <SWITCH>			
R350	1-216-045-00	METAL GLAZE	680 5% 1/10W	R356 1-216-069-00 METAL GLAZE 6.8K 5% 1/10W			
R351	1-216-033-00	METAL GLAZE	220 5% 1/10W	R358 1-216-033-00 METAL GLAZE 220 5% 1/10W			
R354	1-216-033-00	METAL GLAZE	220 5% 1/10W	R359 1-216-089-00 METAL GLAZE 47K 5% 1/10W			
R355	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R360 1-216-089-00 METAL GLAZE 47K 5% 1/10W			
R356	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	*****			
R358	1-216-033-00	METAL GLAZE	220 5% 1/10W	R361 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W			
R359	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R362 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W			
R360	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R363 1-216-055-00 METAL GLAZE 1.8K 5% 1/10W			
R361	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R364 1-216-059-00 METAL GLAZE 2.7K 5% 1/10W			
R362	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R365 1-216-047-00 METAL GLAZE 820 5% 1/10W			
R363	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	*****			
R364	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	*A-1632-005-A A BOARD, COMPLETE			
R365	1-216-047-00	METAL GLAZE	820 5% 1/10W	*****			
R366	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	*I-560-290-00 PLUG, CONNECTOR (2.5MM PITCH)			
R367	1-216-033-00	METAL GLAZE	220 5% 1/10W	*I-564-881-11 PLUG, CONNECTOR 4P			
R370	1-216-033-00	METAL GLAZE	220 5% 1/10W	*I-564-886-11 PLUG, CONNECTOR 9P			
R372	1-216-023-00	METAL GLAZE	82 5% 1/10W	*I-565-393-11 CONNECTOR, BOARD TO BOARD			
R376	1-249-429-11	CARBON	10K 5% 1/4W	*I-565-503-11 CONNECTOR, BOARD TO BOARD 12P			
R377	1-216-043-00	METAL GLAZE	560 5% 1/10W	*****			
R378	1-216-097-00	METAL GLAZE	100K 5% 1/10W	C101 1-126-233-11 ELECT			
R379	1-216-089-00	METAL GLAZE	47K 5% 1/10W	C102 1-126-103-11 ELECT			
R380	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	C104 1-124-910-11 ELECT			
R381	1-216-093-00	METAL GLAZE	68K 5% 1/10W	C106 1-126-233-11 ELECT			
R382	1-216-103-00	METAL GLAZE	180K 5% 1/10W	C108 1-136-165-00 FILM			
R383	1-216-115-00	METAL GLAZE	560K 5% 1/10W	C109 1-163-133-00 CERAMIC CHIP			
R384	1-216-029-00	METAL GLAZE	150 5% 1/10W	C111 1-124-925-11 ELECT			
R385	1-216-085-00	METAL GLAZE	33K 5% 1/10W	C115 1-124-925-11 ELECT			
R387	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C127 1-124-122-11 ELECT			
R388	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C128 1-124-910-11 ELECT			
R389	1-216-101-00	METAL GLAZE	150K 5% 1/10W	C129 1-124-910-11 ELECT			
R390	1-216-033-00	METAL GLAZE	220 5% 1/10W	C138 1-136-165-00 FILM			
R391	1-216-023-00	METAL GLAZE	82 5% 1/10W	C171 1-163-005-11 CERAMIC CHIP			
R392	1-216-019-00	METAL GLAZE	56 5% 1/10W	C172 1-163-005-11 CERAMIC CHIP			
R393	1-216-019-00	METAL GLAZE	56 5% 1/10W	C177 1-102-074-00 CERAMIC			
R394	1-216-019-00	METAL GLAZE	56 5% 1/10W	C181 1-101-004-00 CERAMIC			
R395	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W	C172 1-163-005-11 CERAMIC CHIP 0.001MF			
R396	1-216-041-00	METAL GLAZE	470 5% 1/10W	C181 1-101-004-00 CERAMIC 0.01MF			
				50V			

A C

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK		
<IC>									
IC103	8-759-979-62	IC PCR8574		*A-1638-003-A	C BOARD, COMPLETE	*****			
<COIL>									
L100	1-410-116-11	INDUCTOR	0.56MH	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
L101	1-408-225-00	INDUCTOR	3.3UH	*1-568-878-61	PIN, CONNECTOR 3P				
L102	1-408-413-00	INDUCTOR	22UH	*1-568-881-51	PIN, CONNECTOR 6P				
L107	1-408-397-00	INDUCTOR	1UH	*4-379-160-01	COVER (REAR LID), CV				
<CONNECTOR>									
C71	*1-506-371-00	PIN, CONNECTOR 2P							
<TRANSISTOR>									
Q113	8-729-271-22	TRANSISTOR 2SC2712-G		<CAPACITOR>					
Q114	8-729-271-22	TRANSISTOR 2SC2712-G		C703	1-102-980-00	CERAMIC	270PF	5% 50V	
Q115	8-729-271-22	TRANSISTOR 2SC2712-G		C704	1-102-116-00	CERAMIC	680PF	10% 50V	
Q116	8-729-271-22	TRANSISTOR 2SC2712-G		C705	1-102-976-00	CERAMIC	180PF	5% 50V	
Q125	8-729-900-89	TRANSISTOR DTC144ES		C706	1-102-116-00	CERAMIC	680PF	10% 50V	
Q126	8-729-901-06	TRANSISTOR DTA144EK		C707	1-162-116-00	CERAMIC	680PF	10% 2KV	
Q181	8-729-119-78	TRANSISTOR 2SC2785-HFE		C708	1-162-114-00	CERAMIC	0.0047MF	2KV	
<RESISTOR>									
R101	1-216-025-00	METAL GLAZE	100 5%	1/10W	C709	1-102-116-00	CERAMIC	680PF 10% 50V	
R105	1-216-079-00	METAL GLAZE	18K 5%	1/10W	C710	1-123-947-00	ELECT	10MF 20% 250V	
R107	1-216-081-00	METAL GLAZE	22K 5%	1/10W	C711	1-101-880-00	CERAMIC	47PF 5% 50V	
R108	1-216-079-00	METAL GLAZE	18K 5%	1/10W	C712	1-102-980-00	CERAMIC	270PF 5% 50V	
R110	1-249-429-11	CARBON	10K 5%	1/4W	C714	1-124-360-00	ELECT	1000MF 20% 16V	
R111	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W	C716	1-162-622-11	CERAMIC	330PF 10% 400V	
R116	1-216-023-00	METAL GLAZE	82 5%	1/10W	C717	1-102-114-00	CERAMIC	470PF 10% 50V	
R118	1-216-085-00	METAL GLAZE	33K 5%	1/10W	C718	1-102-114-00	CERAMIC	470PF 10% 50V	
R128	1-216-027-00	METAL GLAZE	120 5%	1/10W	C719	1-102-114-00	CERAMIC	470PF 10% 50V	
R129	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W	<DIODE>				
R130	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W	D701	8-719-929-16	DIODE HZS9.1NB3		
R157	1-216-049-00	METAL GLAZE	1K 5%	1/10W	D702	8-719-911-19	DIODE ISS119		
R158	1-249-409-11	CARBON	220 5%	1/4W	D703	8-719-911-19	DIODE ISS119		
R159	1-249-409-11	CARBON	220 5%	1/4W	D704	8-719-911-19	DIODE ISS119		
R161	1-216-089-00	METAL GLAZE	47K 5%	1/10W	D705	8-719-911-19	DIODE ISS119		
R162	1-216-095-00	METAL GLAZE	82K 5%	1/10W	D706	8-719-911-19	DIODE ISS119		
R163	1-216-095-00	METAL GLAZE	82K 5%	1/10W	D707	8-719-911-19	DIODE ISS119		
R164	1-216-075-00	METAL GLAZE	12K 5%	1/10W	D708	8-719-911-19	DIODE ISS119		
R165	1-216-075-00	METAL GLAZE	12K 5%	1/10W	D709	8-719-911-19	DIODE ISS119		
R167	1-216-059-00	METAL GLAZE	2.7K 5%	1/10W	D710	8-719-911-19	DIODE ISS119		
R168	1-216-089-00	METAL GLAZE	47K 5%	1/10W	D711	8-719-300-33	DIODE RU-3AM		
R169	1-216-059-00	METAL GLAZE	2.7K 5%	1/10W	D713	8-719-911-19	DIODE ISS119		
R181	1-216-049-00	METAL GLAZE	1K 5%	1/10W	<JACK>				
R182	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	J701	1-526-990-11	SOCKET, PICTURE TUBE		
R193	1-216-073-00	METAL GLAZE	10K 5%	1/10W	<COIL>				
R194	1-216-017-00	METAL GLAZE	47 5%	1/10W	L704	1-410-878-21	INDUCTOR	33UH	
R195	1-216-017-00	METAL GLAZE	47 5%	1/10W					
R196	1-216-113-00	METAL GLAZE	470K 5%	1/10W					
<TUNER>									
TU101Δ 1-465-301-11 TUNER, ET. (UV-816 (PLL))									
<IF BLOCK>									
VIF101 1-466-154-21 IF BLOCK (IFG-389S)									

<TRANSISTOR>									
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE							
Q703	8-729-906-70	TRANSISTOR BF871							
Q704	8-729-200-17	TRANSISTOR 2SA1091-0							
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE							
Q706	8-729-906-70	TRANSISTOR BF871							
Q707	8-729-200-17	TRANSISTOR 2SA1091-0							
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE							
Q709	8-729-906-70	TRANSISTOR BF871							
Q710	8-729-200-17	TRANSISTOR 2SA1091-0							

The components identified by shading and mark **A** are critical for safety.
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C **D**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
<RESISTOR>								
R704	1-216-486-00	METAL OXIDE	8.2K 5% 3W	F	C002	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R705	1-202-824-00	SOLID	3.3K 10% 1/2W		C003	1-123-875-11	ELECT 10MF	20% 50V
R706	1-249-409-11	CARBON	220 5% 1/4W		C004	1-124-120-11	ELECT 220MF	20% 16V
R707	1-247-822-11	CARBON	430 5% 1/4W		C005	1-124-791-11	ELECT 1MF	20% 50V
R708	1-249-401-11	CARBON	47 5% 1/4W		C006	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R709	1-202-844-00	SOLID	330K 10% 1/2W		C007	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R710	1-215-469-00	METAL	100K 1% 1/6W		C008	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R711	1-249-426-11	CARBON	5.6K 5% 1/4W		C009	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R712	1-249-417-11	CARBON	1K 5% 1/4W		C010	1-124-120-11	ELECT 220MF	20% 16V
R713	1-215-474-00	METAL	160K 1% 1/6W		C011	1-164-232-11	CERAMIC CHIP 0.01MF	5% 50V
R714	1-216-486-00	METAL OXIDE	8.2K 5% 3W	F	C012	1-123-875-11	ELECT 10MF	20% 50V
R715	1-202-824-00	SOLID	3.3K 10% 1/2W		C013	1-106-220-00	MYLAR 0.1MF	10% 100V
R716	1-249-409-11	CARBON	220 5% 1/4W		C014	1-106-220-00	MYLAR 0.1MF	10% 100V
R717	1-249-415-11	CARBON	680 5% 1/4W		C015	1-124-902-00	ELECT 0.47MF	20% 50V
R718	1-202-814-11	SOLID	33K 10% 1/2W		C016	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
R719	1-249-401-11	CARBON	47 5% 1/4W		C017	1-106-220-00	MYLAR 0.1MF	10% 100V
R720	1-249-423-11	CARBON	3.3K 5% 1/4W		C018	1-163-127-00	CERAMIC CHIP 270PF	5% 50V
R721	1-202-842-11	SOLID	220K 10% 1/2W		C019	1-106-383-00	MYLAR 0.047MF	10% 100V
R722	1-202-848-00	SOLID	680K 10% 1/2W		C020	1-124-917-11	ELECT 33MF	20% 50V
R723	1-249-417-11	CARBON	1K 5% 1/4W		C021	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R724	1-202-846-00	SOLID	470K 10% 1/2W		C022	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R725	1-202-838-00	SOLID	100K 10% 1/2W		C023	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R726	1-202-824-00	SOLID	3.3K 10% 1/2W		C024	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R727	1-249-409-11	CARBON	220 5% 1/4W		C025	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R728	1-216-347-11	METAL OXIDE	0.68 5% 1W	F	C027	1-124-910-11	ELECT 47MF	20% 50V
R729	1-249-416-11	CARBON	820 5% 1/4W		C029	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R730	1-249-401-11	CARBON	47 5% 1/4W		C030	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R731	1-249-423-11	CARBON	3.3K 5% 1/4W		C031	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R732	1-249-415-11	CARBON	680 5% 1/4W		C032	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R733	1-249-415-11	CARBON	680 5% 1/4W		C251	1-124-791-11	ELECT 1MF	20% 50V
R734	1-249-405-11	CARBON	100 5% 1/4W		C252	1-126-233-11	ELECT 22MF	20% 50V
R735	1-215-493-00	METAL	1M 1% 1/6W		C253	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R736	1-216-486-00	METAL OXIDE	8.2K 5% 3W	F	C254	1-106-220-00	MYLAR 0.1MF	10% 100V
R737	1-215-483-00	METAL	390K 1% 1/6W		C255	1-124-636-00	ELECT 3300MF	20% 25V
R739	1-249-417-11	CARBON	1K 5% 1/4W		C261	1-124-791-11	ELECT 1MF	20% 50V
<VARIABLE RESISTOR>								
RV701	1-230-641-11	RES, ADJ, METAL GLAZE	2.2M		C262	1-126-233-11	ELECT 22MF	20% 50V
RV702A	1-230-619-11	RES, ADJ, METAL GLAZE	110M		C263	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
RV703	1-237-749-11	RES, ADJ, CARBON	2200		C264	1-106-220-00	MYLAR 0.1MF	10% 100V
RV704	1-237-749-11	RES, ADJ, CARBON	2200		C265	1-124-564-11	ELECT 4700MF	20% 25V

*A-1642-010-A D BOARD, COMPLETE				C501	1-124-927-11	ELECT 4.7MF	20% 50V	
*****				C502	1-124-927-11	ELECT 4.7MF	20% 50V	
*****				C503	1-106-371-00	MYLAR 0.015MF	10% 400V	
*****				C504	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	
*****				C505	1-108-794-11	MYLAR 0.0015MF	5% 50V	
*****				C506	1-106-375-12	MYLAR 0.022MF	10% 250V	
*****				C507	1-130-783-00	MYLAR 0.33MF	10% 100V	
*****				C508	1-106-375-12	MYLAR 0.022MF	10% 250V	
*****				C509	1-106-220-00	MYLAR 0.1MF	10% 100V	
*****				C510	1-161-959-00	CERAMIC 22PF	10% 500V	
*****				C511	1-108-620-11	MYLAR 0.0033MF	10% 100V	
*****				C512	1-106-220-00	MYLAR 0.1MF	10% 100V	
*****				C513	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	
*****				C514	1-106-228-00	MYLAR 0.22MF	10% 100V	
*****				C515	1-124-791-11	ELECT 1MF	20% 50V	
*****				C516	1-108-614-11	MYLAR 0.001MF	10% 100V	
*****				C517	1-124-252-00	ELECT 0.33MF	20% 50V	
*****				C518	1-124-902-00	ELECT 0.47MF	20% 50V	
*****				C519	1-136-173-00	FILM 0.47MF	5% 50V	

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D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
C520	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	C822	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C521	1-106-220-00	MYLAR	0.1MF	10%	100V	C823	1-106-359-00	MYLAR	0.0047MF	10%	400V
C522	1-124-122-11	ELECT	100MF	20%	50V	C824	1-102-212-00	CERAMIC	820PF	10%	500V
C523	1-108-614-11	MYLAR	0.001MF	10%	100V	C825	1-106-375-12	MYLAR	0.022MF	10%	250V
C524	1-108-798-11	MYLAR	0.0033MF	5%	50V	C1601▲	1-136-518-11	FILM	0.33MF	20%	300V
C525	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C1602▲	1-136-519-11	FILM	0.47MF	20%	300V
C526	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C1603▲	1-164-322-51	CERAMIC	0.0047MF	20%	400V
C527	1-106-220-00	MYLAR	0.1MF	10%	100V	C1604▲	1-164-322-51	CERAMIC	0.0047MF	20%	400V
C531	1-124-190-00	ELECT	680MF	10%	25V	C1605▲	1-164-322-51	CERAMIC	0.0047MF	20%	400V
C532	1-124-514-11	ELECT	100MF	20%	50V	C1606▲	1-164-322-51	CERAMIC	0.0047MF	20%	400V
C533	1-106-216-00	MYLAR	0.068MF	10%	100V	C1607▲	1-161-964-61	CERAMIC	0.0047MF	250V	
C534	1-124-120-11	ELECT	220MF	20%	16V						
C536	1-131-363-00	TANTALUM	4.7MF	10%	16V						
C537	1-124-791-11	ELECT	1MF	20%	50V						
C538	1-108-614-11	MYLAR	0.001MF	10%	100V						
C539	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	CF001	1-577-364-11	VIBRATOR, CERAMIC			
C540	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	CF501	1-567-888-11	OSCILLATOR, CERAMIC			
C592	1-124-122-11	ELECT	100MF	20%	50V						
C593	1-163-129-00	CERAMIC CHIP	330PF	5%	50V						
C601▲	1-161-964-61	CERAMIC	0.0047MF	250V							
C602▲	1-161-964-61	CERAMIC	0.0047MF	250V							
C603	1-162-599-12	CERAMIC	0.0047MF	250V							
C604▲	1-125-318-11	ELECT(BLOCK)	220MF	20%	400V	D001	8-719-911-19	DIODE	ISS119		
C605	1-124-510-11	ELECT	220MF	20%	35V	D002	8-719-929-03	DIODE	HZS6.8NB3		
C606	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	D003	8-719-911-19	DIODE	ISS119		
C607	1-130-834-00	MYLAR	1MF	10%	63V	D004	8-719-911-19	DIODE	ISS119		
C608	1-124-927-11	ELECT	4.7MF	20%	50V	D005	8-719-109-89	DIODE	RD5.6ES-B2		
C611	1-124-910-11	ELECT	47WF	20%	50V	D006	8-719-929-71	DIODE	HZS33NB1		
C612	1-108-614-11	MYLAR	0.001MF	10%	100V	D007	8-719-911-19	DIODE	ISS119		
C613	1-136-539-11	FILM	0.0022MF	3%	2KV	D009	8-719-109-89	DIODE	RD5.6ES-B2		
C614	1-102-030-00	CERAMIC	330PF	10%	500V	D010	8-719-120-78	DIODE	RD6.2ES-L3		
C615	1-124-557-11	ELECT	1000MF	20%	25V	D011	8-719-120-78	DIODE	RD6.2ES-L3		
C616	1-102-030-00	CERAMIC	330PF	10%	500V	D271	8-719-110-36	DIODE	RD13ES-B2		
C617	1-124-122-11	ELECT	100MF	20%	50V	D272	8-719-911-19	DIODE	ISS119		
C618	1-162-115-00	CERAMIC	330PF	10%	2KV	D501	8-719-911-19	DIODE	ISS119		
C619	1-124-556-11	ELECT	2200MF	20%	16V	D504	8-719-911-55	DIODE	U05G		
C620	1-136-173-00	FILM	0.47MF	5%	50V	D506	8-719-800-76	DIODE	ISS226		
C621	1-124-347-00	ELECT	100MF	20%	160V	D508	8-719-911-19	DIODE	ISS119		
C622	1-124-556-11	ELECT	2200MF	20%	16V	D511	8-719-911-55	DIODE	U05G		
C623	1-124-910-11	ELECT	47MF	20%	50V	D512	8-719-911-55	DIODE	U05G		
C624	1-124-122-11	ELECT	100MF	20%	50V	D513	8-719-928-85	DIODE	HZS4.7NB2		
C625	1-124-360-00	ELECT	1000MF	20%	16V	D601▲	8-719-946-90	DIODE	KBU4JL-6088		
C626	1-123-875-11	ELECT	10MF	20%	50V	D602	8-719-300-33	DIODE	RU-3AM		
C627	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	D603	8-719-911-55	DIODE	U05G		
C631	1-124-927-11	ELECT	4.7MF	20%	50V	D604	8-719-911-55	DIODE	U05G		
C632	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	D605	8-719-911-55	DIODE	U05G		
C633	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D606	8-719-300-33	DIODE	RU-3AM		
C801	1-126-105-11	ELECT	1000MF	20%	35V	D607	8-719-300-33	DIODE	RU-3AM		
C802	1-102-030-00	CERAMIC	330PF	10%	500V	D608	8-719-300-33	DIODE	RU-3AM		
C804	1-123-948-00	ELECT	22MF	20%	250V	D609	8-719-929-71	DIODE	HZS33NB1		
C805	1-162-114-00	CERAMIC	0.0047MF		2KV	D610	8-719-300-59	DIODE	CTU-12S		
C806	1-106-220-00	MYLAR	0.1MF	10%	100V	D611	8-719-900-26	DIODE	ERD29-08J		
C807	1-106-395-00	MYLAR	0.15MF	10%	200V	D612	8-719-300-59	DIODE	CTU-12S		
C810	1-123-024-21	ELECT	33MF		160V	D613	8-719-979-85	DIODE	EGP20G		
C811	1-136-111-00	FILM	1MF	5%	200V	D614	8-719-979-85	DIODE	EGP20G		
C812	1-124-634-11	ELECT	1MF	20%	250V	D616	8-719-120-78	DIODE	RD6.2ES-L3		
C813	1-102-212-00	CERAMIC	820PF	10%	500V	D617	8-719-911-19	DIODE	ISS119		
C814▲	1-161-731-11	CERAMIC	0.001MF	10%	2KV	D618	8-719-109-89	DIODE	RD5.6ES-B2		
C815	1-136-111-00	FILM	1MF	5%	200V	D619	8-719-929-71	DIODE	HZS33NB1		
C817	1-136-549-11	FILM	0.0106MF	3%	1.4KV	D620	8-719-800-76	DIODE	ISS226		
C818	1-136-759-11	FILM	0.039MF	10%	630V	D621	8-719-929-71	DIODE	HZS33NB1		
C819▲	1-161-731-11	CERAMIC	0.001MF	10%	2KV	D622	8-719-911-19	DIODE	ISS119		
C820	1-106-218-00	MYLAR	0.0082MF	10%	400V	D623	8-719-911-19	DIODE	RU-3AM		
C821▲	1-162-116-51	CERAMIC	680PF	10%	2KV	D624	8-719-911-19	DIODE	RU-3AM		
						D620	8-719-110-39	DIODE	RD15ES-B1		
						D621	8-719-300-33	DIODE	RU-3AM		
						D622	8-719-300-33	DIODE	RU-3AM		
						D623	8-719-911-19	DIODE	ISS119		
						D624	8-719-911-19	DIODE	ISS119		
						D625	8-719-110-39	DIODE	RD15ES-B1		
						D626	8-719-300-33	DIODE	RU-3AM		
						D627	8-719-300-33	DIODE	RU-3AM		

D

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D803	8-719-300-65	DIODE ES1F		Q006	8-729-901-01	TRANSISTOR DTC144EK	
D804	8-719-911-55	DIODE U05G		Q007	8-729-271-22	TRANSISTOR 2SC2712-G	
D805	8-719-911-55	DIODE U05G		Q008	8-729-271-22	TRANSISTOR 2SC2712-G	
D806	8-719-945-80	DIODE ERC06-15S		Q009	8-729-271-22	TRANSISTOR 2SC2712-G	
D808	8-719-928-08	DIODE ERD28-08S		Q251	8-729-271-22	TRANSISTOR 2SC2712-G	
<IC>				Q261	8-729-271-22	TRANSISTOR 2SC2712-G	
IC001	8-759-501-66	IC SDA2083-B012		Q271	8-729-271-22	TRANSISTOR 2SC2712-G	
IC002	8-752-332-82	IC CXD1050A-09P		Q502	8-729-216-22	TRANSISTOR 2SA1162-G	
IC003	8-759-945-58	IC RC4558P		Q505	8-729-140-96	TRANSISTOR 2SD774-34	
IC005	8-759-748-56	IC SDA2546		Q506	8-729-140-97	TRANSISTOR 2SB734-34	
IC251	8-759-988-94	IC TDA2050		Q507	8-729-216-22	TRANSISTOR 2SA1162-G	
4-201-023-01 SPACER, INSULATING; IC251				Q598	8-729-216-22	TRANSISTOR 2SA1162-G	
4-812-134-00 RIVET NYLON, 3.5; IC251				Q601	8-729-111-67	TRANSISTOR 2SB1094-L	
IC261	8-759-988-94	IC TDA2050		Q602	8-729-209-02	TRANSISTOR 2SD1548-LB	
4-201-023-01 SPACER, INSULATING; IC261				Q603	8-729-111-67	TRANSISTOR 2SB1094-L	
4-812-134-00 RIVET NYLON, 3.5; IC261				Q604	8-729-216-22	TRANSISTOR 2SA1162-G	
IC501	8-759-970-73	IC TEA2028B		Q605	8-729-271-22	TRANSISTOR 2SC2712-G	
IC502	8-759-944-57	IC TDA8170		Q606	8-729-271-22	TRANSISTOR 2SC2712-G	
IC601	8-759-988-95	IC TEA2260		Q607	8-729-920-92	TRANSISTOR 2SD2096-EF	
IC604	8-759-144-84	IC UPC24M05HF		Q608	8-729-271-22	TRANSISTOR 2SC2712-G	
IC608	8-759-037-26	IC TYA7812CT		Q609	8-729-320-62	TRANSISTOR 2SD789-34	
<COIL>				Q801	8-729-271-22	TRANSISTOR 2SC2712-G	
L001	1-408-414-00	INDUCTOR 27UH		Q804	8-729-304-50	TRANSISTOR 2SD1941-06	
L501	1-408-225-00	INDUCTOR 3.3UH		Q805	8-729-119-80	TRANSISTOR 2SC2688-LK	
<RESISTOR>							
L601	*1-420-872-00	COIL, AIR CORE		R001	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L602	1-410-396-41	FERRITE BEAD INDUCTOR		R002	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L603	1-410-396-41	FERRITE BEAD INDUCTOR		R003	1-249-417-11	CARBON 1K 5% 1/4W	
L604	1-410-671-31	INDUCTOR 47UH		R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
L605	1-459-585-11	COIL (WITH CORD) (DRUM TYPE)		R005	1-249-417-11	CARBON 1K 5% 1/4W	
L606	1-421-013-00	COIL (HORIZONTAL CHOKER) 25UH		R006	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
L607	1-410-671-31	INDUCTOR 47UH		R007	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
L803	1-459-104-00	COIL, DUST CORE		R008	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
L804	1-408-239-00	INDUCTOR 4.7MMH		R009	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
L805	Δ 1-459-652-12	HLC		R010	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L806	1-459-115-00	COIL, DCC-H		R011	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
L809	*1-420-872-00	COIL, AIR CORE		R013	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
L810	Δ 1-459-390-11	COIL (WITH CORD)		R014	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
<TRANSFORMER>				R015	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
LF1601 Δ 1-421-866-12 LFT				R016	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
LF1602 Δ 1-421-776-11 LFT							
LF1603 Δ 1-421-592-21 TRANSFORMER, FERRITE				R017	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
T601 Δ 1-450-038-11 S.R.T				R018	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
T602 Δ 1-424-277-11 TRANSFORMER, TRIGGER PULSE				R019	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
T801 Δ 1-437-090-21 HDT				R020	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
T802 Δ 1-439-416-11 TRANSFORMER ASSY, FLYBACK (UX-1600)				R021	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
<IC LINK>				R022	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
PS601 Δ 1-532-984-91 LINK, IC (ICP-N50) 2A				R023	1-216-035-00	METAL GLAZE 270 5% 1/10W	
PS602 Δ 1-532-984-91 LINK, IC (ICP-N50) 2A				R024	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
PS603 Δ 1-532-679-91 LINK, IC (ICP-N15) 0.6A				R025	1-216-025-00	METAL GLAZE 100 5% 1/10W	
<TRANSISTOR>				R026	1-249-417-11	CARBON 1K 5% 1/4W	
Q001 8-729-901-01 TRANSISTOR DTC144EK				R027	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q002 8-729-901-06 TRANSISTOR DTA144EK				R028	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q003 8-729-216-22 TRANSISTOR 2SA1162-G				R029	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q004 8-729-216-22 TRANSISTOR 2SA1162-G				R030	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q005 8-729-901-01 TRANSISTOR DTC144EK				R031	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
<TRANSISTOR>				R032	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R033 1-216-073-00 METAL GLAZE 10K 5% 1/10W				R034	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R035 1-216-081-00 METAL GLAZE 22K 5% 1/10W				R036	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R037 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W				R038	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R039	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R503	1-216-035-00	METAL GLAZE	270 5% 1/10W
R040	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R504	1-249-420-11	CARBON	1.8K 5% 1/4W
R041	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R505	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R042	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R506	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R043	1-216-041-00	METAL GLAZE	470 5% 1/10W	R509	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R044	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R510	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R045	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R514	1-216-033-00	METAL GLAZE	220 5% 1/10W
R046	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R515	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R047	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R517	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R048	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R518	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R049	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R519	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R050	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R520	1-216-037-00	METAL GLAZE	330 5% 1/10W
R051	1-216-041-00	METAL GLAZE	470 5% 1/10W	R521	1-216-025-00	METAL GLAZE	100 5% 1/10W
R052	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R522	1-249-441-11	CARBON	100K 5% 1/4W
R053	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R054	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R524	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R055	1-216-037-00	METAL GLAZE	330 5% 1/10W	R525	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R056	1-216-025-00	METAL GLAZE	100 5% 1/10W	R526	1-249-409-11	CARBON	220 5% 1/4W F
R057	1-216-033-00	METAL GLAZE	220 5% 1/10W	R527	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R058	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R528	1-216-031-00	METAL GLAZE	180 5% 1/10W
R059	1-249-417-11	CARBON	1K 5% 1/4W	R529	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R060	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R530	1-249-448-11	CARBON	1.2 5% 1/4W F
R061	1-249-417-11	CARBON	1K 5% 1/4W	R533	1-216-031-00	METAL GLAZE	180 5% 1/10W
R062	1-249-417-11	CARBON	1K 5% 1/4W	R534	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R063	1-249-429-11	CARBON	10K 5% 1/4W	R535	1-249-753-15	CARBON	4.7M 5% 1/4W
R064	1-249-417-11	CARBON	1K 5% 1/4W	R536	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R065	1-249-429-11	CARBON	10K 5% 1/4W	R537	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R066	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R538	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R067	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R539	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R068	1-249-417-11	CARBON	1K 5% 1/4W	R540	1-216-013-00	METAL GLAZE	33 5% 1/10W
R069	1-249-417-11	CARBON	1K 5% 1/4W	R541	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R070	1-249-417-11	CARBON	1K 5% 1/4W	R542	1-216-308-00	METAL GLAZE	4.7 5% 1/10W
R071	1-249-417-11	CARBON	1K 5% 1/4W	R543	1-249-451-11	CARBON	2.2 5% 1/4W
R072	1-249-417-11	CARBON	1K 5% 1/4W	R544	1-247-745-11	CARBON	330 5% 1/2W
R073	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R545	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R074	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R546	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R075	1-216-033-00	METAL GLAZE	220 5% 1/10W	R547	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R076	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R548	1-216-350-11	METAL OXIDE	1.2 5% 1W F
R077	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R549	1-215-890-11	METAL OXIDE	470 5% 2W F
R078	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R550	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R551	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R252	1-216-039-00	METAL GLAZE	390 5% 1/10W	R552	1-216-433-00	METAL OXIDE	1.2K 5% 1W
R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R553	1-216-869-11	METAL OXIDE	1K 5% 1W
R254	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R554	1-216-037-00	METAL GLAZE	330 5% 1/10W
R255	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R555	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R256	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R257	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R557	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R258	1-215-869-11	METAL OXIDE	1K 5% 1W F	R558	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R259	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R559	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R261	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R560	1-216-037-00	METAL GLAZE	330 5% 1/10W
R262	1-216-039-00	METAL GLAZE	390 5% 1/10W	R591	1-216-047-00	METAL GLAZE	820 5% 1/10W
R263	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R592	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R264	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R593	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R265	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R594	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R266	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R597	1-216-041-00	METAL GLAZE	470 5% 1/10W
R267	1-216-077-00	METAL GLAZE	15K 5% 1/10W F	R598	1-215-900-11	METAL OXIDE	22K 5% 2W F
R268	1-215-869-11	METAL OXIDE	1K 5% 1W F	R601	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R269	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R603	1-215-906-11	METAL OXIDE	15 5% 3W F
R271	1-216-045-00	METAL GLAZE	680 5% 1/10W	R604	1-216-025-00	METAL GLAZE	100 5% 1/10W
R272	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R605	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R273	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R606	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R500	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R607	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R501	1-216-041-00	METAL GLAZE	470 5% 1/10W	R608 A	1-216-488-51	METAL OXIDE	18K 5% 3W F
R502	1-216-033-00	METAL GLAZE	220 5% 1/10W				

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

D H1 H2 J1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R609	1-216-007-00	METAL GLAZE	18	5%	1/10W		
R610	1-244-941-00	CARBON	680K	5%	1/2W		
R611	1-216-015-00	METAL GLAZE	39	5%	1/10W		
R612	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R613	1-216-097-00	METAL GLAZE	100K	5%	1/10W		
R614	1-205-758-11	WIREWOUND	100	10%	10W F		
R616	1-216-099-00	METAL GLAZE	120K	5%	1/10W		
R617	1-216-037-00	METAL GLAZE	330	5%	1/10W		
R618	1-216-431-11	METAL OXIDE	560	5%	1W F		
R619	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R620	1-216-081-00	METAL GLAZE	22K	5%	1/10W		
R621	1-216-077-00	METAL GLAZE	15K	5%	1/10W		
R622	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R623	1-216-081-00	METAL GLAZE	22K	5%	1/10W		
R624	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W		
R625	1-215-865-11	METAL OXIDE	220	5%	1W F		
R626	1-216-037-00	METAL GLAZE	330	5%	1/10W		
R628	1-216-001-00	METAL GLAZE	10	5%	1/10W		
R629	1-216-037-00	METAL GLAZE	330	5%	1/10W		
R633	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R634	1-216-430-11	METAL OXIDE	390	5%	1W F		
R635	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R636	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R643	1-217-190-21	WIREWOUND	0.15	5%	2W F		
R651	1-216-025-00	METAL GLAZE	100	5%	1/10W		
R653	1-205-758-11	WIREWOUND	100	10%	10W F		
R802	1-249-443-11	CARBON	0.47	5%	1/4W F		
R805	1-249-448-11	CARBON	1.2	5%	1/4W F		
R806	1-216-093-00	METAL GLAZE	68K	5%	1/10W		
R807	1-215-869-11	METAL OXIDE	1K	5%	1W F		
R809	1-202-821-11	SOLID	1.8K	10%	1/2W		
R810	1-202-818-00	SOLID	1K	10%	1/2W		
R811	1-215-863-11	METAL OXIDE	100	5%	1W		
R812	1-247-285-00	CARBON	75K	5%	1/2W		
R815	1-215-884-11	METAL OXIDE	47	5%	2W F		
R816	1-215-868-00	METAL OXIDE	680	5%	1W F		
R817	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R820	1-249-403-11	CARBON	68	5%	1/4W		
R821	1-247-725-11	CARBON	10K	5%	1/4W F		
R822 Δ	1-217-778-61	FUSIBLE	1K	5%	1W F		
R825	1-216-349-00	METAL OXIDE	1	5%	1W F		
R826	1-216-097-00	METAL GLAZE	100K	5%	1/10W		
R827	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R828	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		
R829	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W		
R831	1-249-451-11	CARBON	2.2	5%	1/4W		
R1601A Δ	1-246-513-75	CARBON	47K	5%	1/4W		
R1602A Δ	1-244-945-91	CARBON	1M	5%	1/2W		
R1603A Δ	1-217-328-11	WIREWOUND	2.7	10%	7W F		
R1604A Δ	1-246-513-75	CARBON	47K	5%	1/4W		
R1605A Δ	1-218-265-91	METAL GLAZE	8.2M	5%	1W		
R5501	1-216-073-00	METAL GLAZE	10K	5%	1/10W		
R5503	1-216-308-00	METAL GLAZE	4.7	5%	1/10W		
R5504	1-216-121-00	METAL GLAZE	1M	5%	1/10W		
R5505	1-216-001-00	METAL GLAZE	10	5%	1/10W		
<VARIABLE RESISTOR>							
RV501	1-238-013-11	RES, ADJ, CARBON	2.2K				
RV502	1-238-016-11	RES, ADJ, CARBON	10K				
RV601	1-238-011-11	RES, ADJ, CARBON	470				
<SPARK GAP>							
SG801	1-519-422-11	GAP, SPARK					
<THERMISTOR>							
THP601A 1-808-059-31 THERMISTOR, POSITIVE							

<RESISTOR>							
R1651	1-249-413-11	CARBON	470	5%	1/4W		
R1652	1-249-413-11	CARBON	470	5%	1/4W		
<SWITCH>							
S1651	1-571-532-21	SWITCH, TACTIL					
S1652	1-571-532-21	SWITCH, TACTIL					
S1653	1-571-532-21	SWITCH, TACTIL					

<SWITCH>							
*1-633-410-11	H2 BOARD						

<DIODE>							
D1651	8-719-948-31	DIODE LD-201VR					
D1652	8-719-948-31	DIODE LD-201VR					
D1652	*4-387-825-02	HOLDER, LED; D1651					
D1654	8-719-948-31	DIODE LD-201VR					
D1654	*4-387-825-02	HOLDER, LED; D1652					
D1654	8-719-948-31	DIODE LD-201VR					
<DIODE>							
*4-387-825-02	HOLDER, LED; D1654						
<IC>							
IC1651	8-741-138-70	IC BX-1387					
<RESISTOR>							
R1662	1-249-413-11	CARBON	470	5%	1/4W		

<J1 BOARD, COMPLETE>							
*A-1651-014-A	J1 BOARD, COMPLETE						

1-561-534-41 SOCKET 21P							
*1-564-518-11	PLUG, CONNECTOR 3P						
*1-564-524-11	PLUG, CONNECTOR 9P						
*1-564-527-11	PLUG, CONNECTOR 12P						
*1-566-641-11	CONNECTOR, HINGE (TAB) 18P						

J1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK						
<CAPACITOR>													
C203	1-124-925-11	ELECT	2.2MF	20%	50V	C1436	I-163-009-11	CERAMIC CHIP 0.001MF	10%	50V			
C205	1-124-927-11	ELECT	4.7MF	20%	50V	C1437	I-163-009-11	CERAMIC CHIP 0.001MF	10%	50V			
C206	1-124-925-11	ELECT	2.2MF	20%	50V	C1438	I-106-367-00	MYLAR 0.01MF	10%	400V			
C207	1-124-927-11	ELECT	4.7MF	20%	50V	C1439	I-106-367-00	MYLAR 0.01MF	10%	400V			
C213	1-126-233-11	ELECT	22MF	20%	50V	C1440	I-123-875-11	ELECT 10MF	20%	50V			
C214	1-106-363-00	MYLAR	0.0068MF	10%	400V	C1441	I-123-875-11	ELECT 10MF	20%	50V			
C217	1-106-363-00	MYLAR	0.0068MF	10%	400V	C1442	I-106-220-00	MYLAR 0.1MF	10%	100V			
C218	1-106-375-12	MYLAR	0.022MF	10%	250V	C1443	I-106-220-00	MYLAR 0.1MF	10%	100V			
C219	1-106-375-12	MYLAR	0.022MF	10%	250V	C1444	I-124-910-11	ELECT 4.7MF	20%	50V			
C220	1-108-620-11	MYLAR	0.0033MF	10%	100V	C1445	I-102-824-00	CERAMIC 470PF	5%	50V			
C221	1-108-620-11	MYLAR	0.0033MF	10%	100V	C1446	I-102-824-00	CERAMIC 470PF	5%	50V			
C222	1-106-385-00	MYLAR	0.056MF	10%	100V	C1501	I-124-927-11	ELECT 4.7MF	20%	50V			
C223	1-106-385-00	MYLAR	0.056MF	10%	100V	C1502	I-124-791-11	ELECT 1MF	20%	50V			
C224	1-106-367-00	MYLAR	0.01MF	10%	400V	C1503	I-108-614-11	MYLAR 0.001MF	10%	100V			
C225	1-136-173-00	FILM	0.47MF	5%	50V	C1504	I-124-910-11	ELECT 4.7MF	20%	50V			
C226	1-136-173-00	FILM	0.47MF	5%	50V	C1505	I-106-383-00	MYLAR 0.047MF	10%	100V			
C227	1-106-375-12	MYLAR	0.022MF	10%	250V	C1506	I-108-620-11	MYLAR 0.0033MF	10%	100V			
C228	1-106-379-12	MYLAR	0.033MF	10%	250V	C1507	I-108-620-11	MYLAR 0.0033MF	10%	100V			
C229	1-106-371-00	MYLAR	0.015MF	10%	400V	C1508	I-124-791-11	ELECT 1MF	20%	50V			
C230	I-106-371-00	MYLAR	0.015MF	10%	400V	C1509	I-124-791-11	ELECT 1MF	20%	50V			
C231	1-124-902-00	ELECT	0.47MF	20%	50V	C1510	I-124-927-11	ELECT 4.7MF	20%	50V			
C232	1-123-875-11	ELECT	10MF	20%	50V	C1511	I-124-927-11	ELECT 1MF	20%	50V			
C233	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C1512	I-106-363-00	MYLAR 0.0068MF	10%	400V			
C234	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C1513	I-163-105-00	CERAMIC CHIP 33PF	5%	50V			
C235	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	<CONNECTOR>							
C236	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	CN1401	1-565-838-11	PIN JACK BLOCK 2P					
C237	1-124-902-00	ELECT	0.47MF	20%	50V	<DIODE>							
C238	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	D201	8-719-929-16	DIODE HZS9.1NB3					
C239	1-126-103-11	ELECT	470MF	20%	16V	D202	8-719-929-16	DIODE HZS9.1NB3					
C240	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V	D205	8-719-929-08	DIODE HZS7.5NB3					
C241	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V	D206	8-719-929-08	DIODE HZS7.5NB3					
C242	1-163-033-00	CERAMIC CHIP	0.022MF			D1401	8-719-929-08	DIODE HZS7.5NB3					
C243	1-163-033-00	CERAMIC CHIP	0.022MF			D1403	8-719-929-08	DIODE HZS7.5NB3					
C244	1-163-033-00	CERAMIC CHIP	0.022MF			D1404	8-719-929-08	DIODE HZS7.5NB3					
C245	1-163-033-00	CERAMIC CHIP	0.022MF			D1405	8-719-929-08	DIODE HZS7.5NB3					
C1401	1-123-875-11	ELECT	10MF	20%	50V	D1407	8-719-929-20	DIODE HZS10NB3					
C1402	1-126-103-11	ELECT	470MF	20%	16V	D1408	8-719-929-16	DIODE HZS9.1NB3					
C1403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1409	8-719-929-16	DIODE HZS9.1NB3					
C1404	1-106-220-00	MYLAR	0.1MF	10%	100V	D1410	8-719-929-16	DIODE HZS9.1NB3					
C1405	1-136-017-00	CERAMIC CHIP	0.0047MF			D1415	8-719-929-08	DIODE HZS7.5NB3					
C1406	1-106-220-00	MYLAR	0.1MF	10%	100V	D1418	8-719-929-08	DIODE HZS7.5NB3					
C1407	1-124-910-11	ELECT	47MF	20%	50V	D1419	8-719-929-08	DIODE HZS7.5NB3					
C1408	1-124-122-11	ELECT	100MF	20%	50V	D1420	8-719-929-08	DIODE HZS7.5NB3					
C1409	1-126-233-11	ELECT	22MF	20%	50V	D1421	8-719-929-08	DIODE HZS7.5NB3					
C1410	1-123-875-11	ELECT	10MF	20%	50V	D1422	8-719-929-08	DIODE HZS7.5NB3					
C1411	1-123-875-11	ELECT	10MF	20%	50V	D1423	8-719-929-08	DIODE HZS7.5NB3					
C1412	1-124-910-11	ELECT	47MF	20%	50V	D1424	8-719-929-08	DIODE HZS7.5NB3					
C1413	1-124-910-11	ELECT	47MF	20%	50V	D1425	8-719-929-08	DIODE HZS7.5NB3					
C1414	1-123-875-11	ELECT	10MF	20%	50V	D1426	8-719-929-08	DIODE HZS7.5NB3					
C1415	1-106-220-00	MYLAR	0.1MF	10%	100V	D1501	8-719-300-33	DIODE RU-3AM					
C1416	1-106-220-00	MYLAR	0.1MF	10%	100V	D1502	8-719-911-19	DIODE ISS119					
C1417	1-124-120-11	ELECT	220MF	20%	16V	D1503	8-719-911-19	DIODE ISS119					
C1418	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1504	8-719-911-19	DIODE ISS119					
C1419	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1505	8-719-911-19	DIODE ISS119					
C1425	1-124-902-00	ELECT	0.47MF	20%	50V	D1506	8-719-929-79	DIODE HZS36NB4					
C1426	1-124-902-00	ELECT	0.47MF	20%	50V	D1507	8-719-911-19	DIODE ISS119					
C1427	1-136-017-00	CERAMIC CHIP	0.0047MF			D1510	8-719-911-19	DIODE ISS119					
C1428	1-136-017-00	CERAMIC CHIP	0.0047MF										
C1429	1-136-017-00	CERAMIC CHIP	0.0047MF										
C1430	1-163-003-11	CERAMIC CHIP	330PF	10%	50V								
C1431	1-126-529-11	ELECT	0.47MF	20%	50V								
C1432	1-124-902-00	ELECT	0.47MF	20%	50V								
C1433	1-124-122-11	ELECT	100MF	20%	50V								

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<IC>							
IC201	8-759-013-17	IC TDA6200		R1401	1-216-023-00	METAL GLAZE	82 5% 1/10W
IC1401	8-752-032-27	IC CXA1114P		R1402	1-216-170-00	METAL GLAZE	68 5% 1/8W
IC1402	8-759-946-32	IC TEA2014A		R1403	1-216-089-00	METAL GLAZE	47K 5% 1/10W
IC1403	8-759-040-53	IC MC14053BCP		R1404	1-216-178-00	METAL GLAZE	150 5% 1/8W
IC1501	8-759-942-16	IC TEA2031A		R1405	1-249-429-11	CARBON	10K 5% 1/4W
<TRANSISTOR>							
Q201	8-729-271-22	TRANSISTOR 2SC2712-G		R1407	1-216-113-00	METAL GLAZE	470K 5% 1/10W
Q202	8-729-271-22	TRANSISTOR 2SC2712-G		R1408	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q1401	8-729-216-22	TRANSISTOR 2SA1162-G		R1409	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q1402	8-729-271-22	TRANSISTOR 2SC2712-G		R1410	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q1403	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1411	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q1404	8-729-173-38	TRANSISTOR 2SA733-K		R1412	1-216-089-00	METAL GLAZE	47K 5% 1/10W
<RESISTOR>							
R201	1-216-079-00	METAL GLAZE 18K	5% 1/10W	R1413	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R202	1-216-206-00	METAL GLAZE 2.2K	5% 1/8W	R1414	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R203	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1415	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R204	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1416	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R205	1-216-085-00	METAL GLAZE 33K	5% 1/10W	R1417	1-216-023-00	METAL GLAZE	82 5% 1/10W
R206	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W	R1418	1-247-738-11	CARBON	82 5% 1/2W F
R207	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W	R1422	1-216-025-00	METAL GLAZE	100 5% 1/10W
R208	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1423	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R209	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1424	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R210	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1425	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R211	1-216-097-00	METAL GLAZE 100K	5% 1/10W	R1426	1-216-025-00	METAL GLAZE	100 5% 1/10W
R212	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1427	1-216-001-00	METAL GLAZE	10 5% 1/10W
R213	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1428	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R214	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1429	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R215	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1430	1-216-170-00	METAL GLAZE	68 5% 1/8W
R216	1-216-081-00	METAL GLAZE 22K	5% 1/10W	R1431	1-216-041-00	METAL GLAZE	470 5% 1/10W
R217	1-216-077-00	METAL GLAZE 15K	5% 1/10W	R1432	1-216-041-00	METAL GLAZE	470 5% 1/10W
R218	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1433	1-216-033-00	METAL GLAZE	220 5% 1/10W
R219	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1434	1-249-393-11	CARBON	10 5% 1/4W F
R220	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1437	1-249-429-11	CARBON	10K 5% 1/4W
R221	1-216-041-00	METAL GLAZE 470	5% 1/10W	R1440	1-216-045-00	METAL GLAZE	680 5% 1/10W
R222	1-216-041-00	METAL GLAZE 470	5% 1/10W	R1441	1-216-045-00	METAL GLAZE	680 5% 1/10W
R223	1-216-049-00	METAL GLAZE 1K	5% 1/10W	R1442	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R224	1-216-049-00	METAL GLAZE 1K	5% 1/10W	R1443	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R225	1-216-049-00	METAL GLAZE 1K	5% 1/10W	R1444	1-216-033-00	METAL GLAZE	220 5% 1/10W
R226	1-216-049-00	METAL GLAZE 1K	5% 1/10W	R1445	1-216-025-00	METAL GLAZE	100 5% 1/10W
R227	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1452	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R228	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1453	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R229	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1454	1-216-180-00	METAL GLAZE	180 5% 1/8W
R230	1-216-079-00	METAL GLAZE 18K	5% 1/10W	R1455	1-216-180-00	METAL GLAZE	180 5% 1/8W
R231	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1457	1-216-025-00	METAL GLAZE	100 5% 1/10W
R232	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1459	1-216-025-00	METAL GLAZE	100 5% 1/10W
R233	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1460	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R234	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1461	1-216-190-00	METAL GLAZE	470 5% 1/8W
R240	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1462	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R231	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1463	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R232	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R1464	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R233	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1465	1-216-023-00	METAL GLAZE	82 5% 1/10W
R234	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W	R1466	1-216-033-00	METAL GLAZE	220 5% 1/10W
R240	1-216-033-00	METAL GLAZE 220	5% 1/10W	R1467	1-216-025-00	METAL GLAZE	100 5% 1/10W
R241	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R1468	1-216-025-00	METAL GLAZE	100 5% 1/10W
R242	1-216-091-00	METAL GLAZE 56K	5% 1/10W	R1469	1-216-025-00	METAL GLAZE	100 5% 1/10W
R243	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1470	1-216-025-00	METAL GLAZE	100 5% 1/10W
R244	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W	R1471	1-216-023-00	METAL GLAZE	82 5% 1/10W
R245	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1472	1-216-023-00	METAL GLAZE	82 5% 1/10W
R246	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W	R1473	1-216-023-00	METAL GLAZE	82 5% 1/10W
R247	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1474	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R248	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W	R1476	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R249	1-216-075-00	METAL GLAZE 12K	5% 1/10W	R1477	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R250	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W				

J1 J2 IFG

IFG

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
<COIL>			
L1	1-408-410-00	INDUCTOR	12UH
L2	1-408-410-00	INDUCTOR	12UH
L3	1-410-064-11	INDUCTOR	2.7MMH
L4	1-408-421-00	INDUCTOR	100UH
L5	1-408-421-00	INDUCTOR	100UH
<TRANSISTOR>			
Q2	8-729-901-00	TRANSISTOR DTC124EK	
Q3	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4	8-729-901-00	TRANSISTOR DTC124EK	
<RESISTOR>			
JC8	1-216-296-00	METAL GLAZE	0 5% 1/8W
JC10	1-216-296-00	METAL GLAZE	0 5% 1/8W
R1	1-216-045-00	METAL GLAZE	680 5% 1/10W
R2	1-216-043-00	METAL GLAZE	560 5% 1/10W
R3	1-216-043-00	METAL GLAZE	560 5% 1/10W
R5	1-216-045-00	METAL GLAZE	680 5% 1/10W
R6	1-216-043-00	METAL GLAZE	560 5% 1/10W
R7	1-216-043-00	METAL GLAZE	560 5% 1/10W
R9	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R10	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R11	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R12	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R15	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R16	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R17	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R18	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R19	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R20	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R22	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R24	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R25	1-216-077-00	METAL GLAZE	15K 5% 1/10W
<VARIABLE RESISTOR>			
RV1	1-238-016-11	RES, ADJ, CARBON 10K	
RV2	1-238-019-11	RES, ADJ, CARBON 47K	

ACCESSORIES AND PACKING MATERIALS

PART NO.	DESCRIPTION	REMARK
1-465-363-11	COMMANDER, REMOTE (RM-689)	
4-200-139-11	MANUAL, INSTRUCTION	
*4-200-172-01	CUSHION (UPPER) (ASSY)	
*4-200-173-01	CUSHION (LOWER) (ASSY)	
*4-200-174-01	INDIVIDUAL CARTON	
*4-380-340-01	BAG, PROTECTION	

MISCELLANEOUS

- Δ 1-426-383-11 COIL DEMAGNETIZATION
- Δ 1-451-295-11 DEFLECTION YOKE (Y21PFA2)
- 1-452-032-00 MAGNET, DISK; 10MM ϕ
- 1-452-094-00 MAGNET, ROTATABLE DISK; 15MM ϕ
- 1-452-277-00 MAGNET, BMC

SPEAKER

- Δ 1-575-487-11 CORD, POWER (WITH NOISE FILTER)

- V901 Δ 8-738-753-05 PICTURE TUBE (A51JXH60X)